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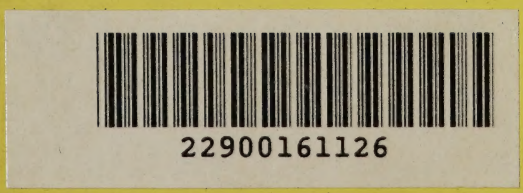

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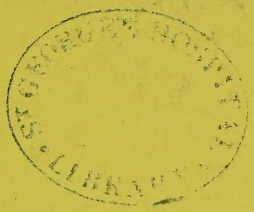

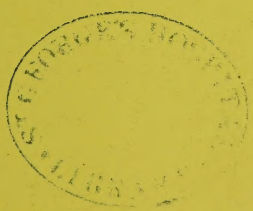

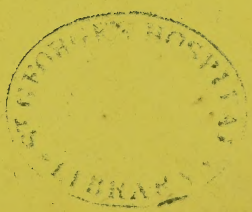

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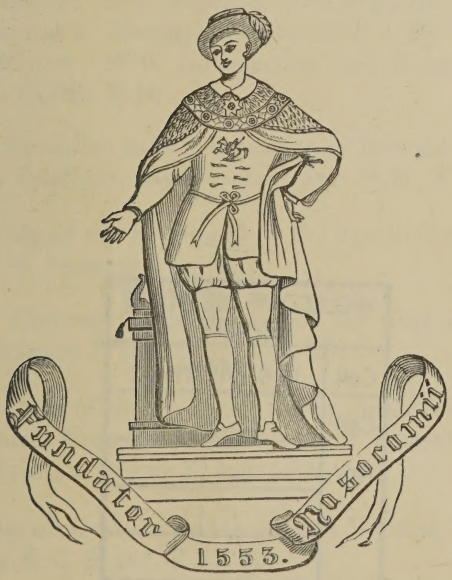

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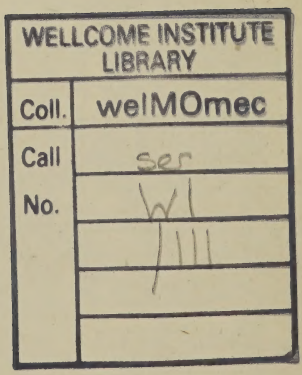

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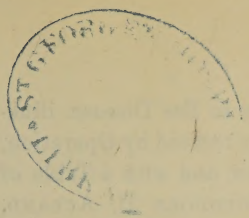
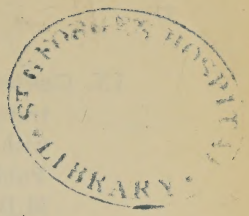

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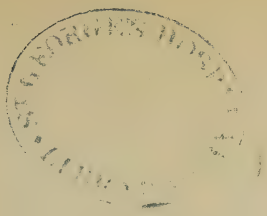
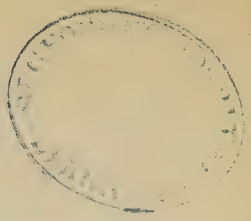

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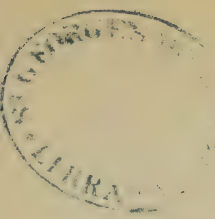

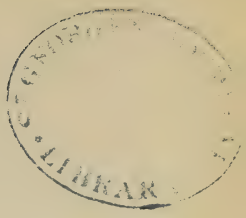

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Library of British Medical Association, 429, Strand, W.C.
The Journal of The Pharmaceutical Society of Great Britain
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Le Progrès Médical (Dr. Bourneville, 6, Rue des Écoles, Paris)
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Transactions of The New York Academy of Medicine, 17, 19, 21, West Forty-third Street, New York
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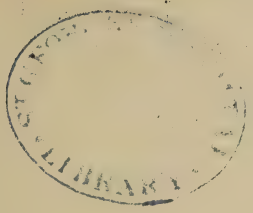
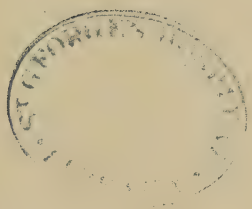




J. S. Whitney.

Feb 12 1893

In Memoriam.

JOHN SYER BRISTOWE, M.D.(Lond.), LL.D.(Edin.), F.R.S.,

Born January 19th, 1827; died August 20th, 1895.

John Syer Bristowe was born at Camberwell in 1827. He belonged to a medical family, both his father and grandfather having practised Physic. He received his education as a boy at King's College, whence he went to St. Thomas's in 1846. There he took most of the principal prizes, securing the highest distinction, the Treasurer's Gold Medal, in 1848. In 1849 he obtained the diplomas of M.R.C.S. and L.S.A., and in the same year was appointed House Surgeon. In the following year he took his M.B. degree at the University of London, obtaining the Medal and Scholarship in Surgery, and the Medal in Physiology. During the same year he was appointed Curator of the Museum, and Pathologist at St. Thomas's Hospital. In 1852 he proceeded to the degree of M.D.(Lond.), and in 1854 he was elected Assistant Physician at St. Thomas's. During the next few years he held several teaching posts, being appointed Lecturer on Botany in 1859, on Materia Medica in 1860, on General Anatomy and Physiology in 1865, on Pathology in 1870. In 1860 he was elected full Physician, and in 1876 he became Lecturer on Medicine, which post he held until the time of his retirement in 1892.

His career outside St. Thomas's was no less distinguished. At the College of Physicians he was elected Fellow in 1858, Examiner in Medicine in 1869 and 1870, Croonian Lecturer

in 1872, Lumleian Lecturer in 1879, Censor in 1876, 1886, 1887, 1888, and 1889. During the latter year he was Senior Censor. He was Examiner in Medicine at the Universities of Oxford and London, at the Royal College of Surgeons, and at the War Office. He was also Medical Officer of Health for the parish of Camberwell, Physician to the Commercial Union Assurance Company, and to Westminster School.

In 1881 he was elected F.R.S., and the degree of LL.D. was conferred upon him at the Tercentenary of Edinburgh University in 1884. He was President of the Pathological Society in 1885, of the Neurological Society in 1891, of the Medical Society of London in 1893. In the last year he delivered the Lettsomian Lectures on "Syphilitic Affections of the Nervous System." He was also President of the Society of Medical Officers of Health, of the Hospitals Association, and of the Metropolitan Counties Branch of the British Medical Association. He was a member of the Royal Commission on Vaccination from 1886 to 1892, and was a member of the Council of the National Pension Fund for Nurses.

His principal work—'The Theory and Practice of Medicine'—appeared in 1876, and has passed through seven editions. In 1888 he published his volume on 'Diseases of the Nervous System.' Besides writing these larger contributions to medical literature he published many papers in the Transactions of the various learned Societies, and in the Medical Journals. He was also the author of several reports to the Privy Council,—"On Phosphorus Poisoning in Match Manufacture" in 1862, "On Infection by Rags and Paper Works" in 1865, "On the Cattle Plague" in conjunction with Professor Burdon Sanderson, and "On the Hospitals of the United Kingdom" jointly with Mr. Timothy Holmes.

In 1887 his term of office as Physician to St. Thomas's Hospital having expired, he was reappointed for a further term of five years at the unanimous request of his colleagues. In 1892 he retired, and was elected Consulting Physician and Governor. At the time of his death he was Consulting Physician to the Victoria Hospital for Children, and to the West End Hospital for Diseases of the Nervous System.

Dr. Bristowe has left a lasting record in the annals of St. Thomas's Hospital, and in the medical literature of the world. He has left his record at St. Thomas's as a teacher in various departments for more than forty years, and, most of all, in medicine from the beginning to the end. He has also left his record there as that of an unselfish man, devoted to his work, helpful in all ways to the student, faithful and candid to his colleagues, and determined in all things to uphold the dignity and renown of the ancient institution to which he was attached.

Altogether apart from his personality he made a connecting channel through which there flowed from the old St. Thomas's to the new, an ever expanding current of knowledge and usefulness which not only greatly helped our school to maintain an increasing vigour, but extended also far beyond its limits.

When as a first year student, now forty-two years ago, I made the acquaintance of Dr. Bristowe, he was Lecturer on Botany, and, although only some twenty-seven years of age, was clearly marked out for distinction. He had been first in his year during his student career, and had attained a very high position in the examination for the degree of Doctor of Medicine in the University of London, taking more than one scholarship and several medals. His lectures on botany had a distinct attraction for an earnest student. They were delivered with ease, and with a singular freedom from affectation, particularly the affectation of superior knowledge or authority. With a frankness characteristic of him through life, he was wont to say that he really knew nothing about botany. This was far from true ; for, as a result of hard reading and practical study with the microscope, he was much more than sufficiently versed in structural botany, to which he devoted the larger part of his course. It was natural to him to like this kind of investigation, and his logical mind enabled him to put before his class such things as the minute anatomy, the reproduction, and the morphology of the chief divisions of the vegetable kingdom in a terse, coherent, and suggestive form, admirably calculated to stimulate the exploring faculty in his hearers. To classification he paid little more than

formal attention. Out of class he was genial and affable, setting us, his pupils, perfectly at ease in his presence. Hence a botanical excursion, with him as leader, was a truly pleasant function, for we felt as we traversed lane, wood, and down with him that our teacher was, notwithstanding his high attainments, of our own flesh and blood. His studies in botany had not included much more than medicinal plants and the ordinary types of orders. When a plant was brought to him which he could not identify he said quite plainly that he did not know it. The avowal and the comic smile with which it came increased our respect for the true man that he was. We were, of course, conscious that he was not specially a botanist, but that he was filling the chair, according to the practice of the time, as a step in medical promotion. None the less, however, did we feel the value of what he taught us. Such early experience was soon after followed by his introduction to us in the out-patient department, in the wards, and in the post-mortem room. In common with the rest of the assistant physicians, he was allotted a few beds in the medical wards. In all these scenes of practical work we found him again the helpful teacher, full of *camaraderie* on the one hand, and on the other, in knowledge and method a master, himself striving every day to advance medical knowledge. Those who followed him then and after will never forget his painstaking examination of patients, his minute and extensive record, and his pictorial description of symptoms. As he took the cases they came out clear for diagnosis or discussion of diagnosis, with acute note of everything that was irregular or novel. Further, a remarkable facility in drawing enabled him to illustrate on paper or the blackboard the probable conditions of viscera, &c., just as the same facility, freely used, had helped to give life to his lectures. He certainly showed an abiding temptation to the artistic use of pen or pencil, mostly of the pen. As a clinical clerk, he might frequently be seen sketching endless varieties of heads, of animals, and *grotesqueries*, generally in excellent style, on the well-suited calf in which the old ward-books were bound. When one of these covers was completely filled, the sketches were

touched up and linked by lines and shading, the fantasies of his pen becoming objects of admiration and cupidity. Mr. Whitfield, then medical secretary, became possessed of several of them, his well-known collecting genius appreciating their value and treasuring them accordingly. I think that Bristowe kept one or two ; the rest are probably scattered amongst the mementoes of his old fellow-students—mementoes of the time and the man. This habit never left him. So long as he continued to attend meetings and committees at the hospital he continued to leave on the foolscap placed on the table, drawings and caricatures, to be garnered afterwards by appreciative hands. It is, of course, well known that he had early in life and at a later period published many poems of considerable merit, displaying the same imaginative faculty, which, in addition to skill of hand, made the value of his sketches. It came to pass, as I knew him more, that two things greatly perplexed me. First, the accomplished artist wrote a hand which, though not ugly, was difficult to read on account, chiefly, of the blurring of the ends of words and the imperfect formation of many of the letters. He could write plainly enough when he gave his mind to it, but as his thoughts were placed upon paper they seemed to outstrip his pen, leaving a dash here and a wavy line there, only to be interpreted, if interpreted at all, by a reader who had carefully followed the train of argument or the course of statement in which they were intended to play their part. On this point he used to tell with great enjoyment a story against himself. In an examination at the University of London, when he came up for the *vivâ voce* his examiner placed before him several words cut out of his papers and asked him to read them to him. In the absence of the context he was unable to supply the information. It was creditable to the patience of the examiner (the late Dr. Carpenter) that he did read the papers, and in the end awarded the scholarship in competition for which they were written to Bristowe. The second puzzle was that the man of imagination should be so strongly filled with a spirit of scepticism as to be a worthy follower of the apostle after whom our hospital is named. In Bristowe's case imagination was tempered and more than controlled by an innate

tendency to questioning, both in regard of facts and inferences. The question did not go so far even as "Why?" but stopped first at "Is it so?" leaving the "Why" to be considered if the answer to the first question was satisfactory enough to allow him to proceed to the second. He could, fairly enough, take nothing for granted; he seemed, however, to go further and to take up a position almost hostile to any new thing, great or small. He would be as slow to accept the existence of a valvular murmur or a friction sound which had been noted by his assistants as to adopt a new theory of the meanings of the heart-sounds in health or disease. This slowness of conviction led him on to most valuable investigations. He would often, in spite of the already accepted opinions regarding them, follow out for himself the intricacies of many obscure symptoms and diseases, sometimes confirming, sometimes dissenting from the earlier decisions, rarely without adding materially to our knowledge. He was thus always determined to make sure of this evidence, always determined to see, if possible, the truth independently of all the weight of existing authority. None but those who have carefully followed his work know the great value which this stern spirit of true investigation has attached to it. It appears to me that the whole school of St. Thomas's has been deeply impressed and most wholesomely disciplined by the word and example of Bristowe, himself doubtless influenced, as no doubt others have been, by the severe rules of conscience inculcated by George Rainey. Onward, as time allowed him to verify things that had been often more than doubtful to him, he was able to form conclusions. The scepticism, which had almost amounted to prejudice, tended then to be in many instances replaced by a conviction. Once satisfied, he would support the new or received idea, and would do battle for it as strongly as he had before doubted it.

> "There lives more faith in honest doubt,
> Believe me, than in half the creeds."

This is assuredly true of the man whose loss we have at heart. His mental attitude in controversial matters was

well seen in respect of his political opinions. For a great part of his life he was a Liberal in politics; but when the Home Rule question filled the field he felt impelled to his wonted process of examination, with the result that he became first a Liberal Unionist, and afterwards something very like a Tory. In one point his scepticism has produced an impression which is far from just or true; I mean in regard of his way of dealing with therapeutics. He is generally said to have given too little attention to the subject of therapeutics, alike in his great work on Medicine and in his hospital teaching. In my belief he could not preach many uses of drugs and many accessory treatments because he had not sufficiently proved them. He seems to have felt like David in face of the armour provided for his use. Yet he could use the sling and the stone effectively, and many a time have I seen him trying the armour in hope of availing himself of it when he understood its application. I remember very well witnessing his careful trials of injections of salt water and dealbuminised serum into the veins of cholera patients in 1854. And I know that he urged strongly the establishment of a complete installation of baths of all kinds in the new hospital on the Embankment, in view of a thorough estimation of their remedial applications. Those who knew him know well that it was only the same caution which forbade him to give an absolute diagnosis in a case of doubtful diagnosis which forbade him also to teach decisively any method of treatment about which he was not absolutely certain. For all of us diagnosis must precede treatment. I say without hesitation that diagnosis was so regarded by him, and that he neither despised nor failed to make active use of therapeutics wherever his reasoning allowed. The world may be sure that whatever he said or left unsaid was determined by the use of a strict judicial estimation of the value of the information supplied to him by his extraordinary industry in reading and in research. Those only who have toiled as he toiled, and they are few, can fairly judge him in respect of the matters which have been noted. In what I have so far written I have put down my recollections of Bristowe as I first saw him, and I have tried to trace the

development of the qualities which were then apparent in him.

As time passed we became colleagues, and I was then admitted to his more intimate friendship and to his home. While I learned more now of his vast professional knowledge, I came to learn more of his true, generous quality of heart in dealing with his fellow-men, even where he was determinedly opposed to their opinions. I saw the kindly fairness underlying that appearance of rigidity, scarce short of obstinacy, which seemed to make him a hard judge of both theories and actions, and many a time have I felt the kindly sternness which only increased the trust and affection which he inspired. His innate fairness, indeed, with his kindliness, led him some years ago to give an address at Ryde of so lofty a character as to expose him to much harsh comment on the part of people who could not reach to his standpoint. His inner life was essentially domestic. The hours devoted to work were succeeded by a happy life in the family, full of all kinds of wholesome activity. In his recreations he was alike simple. It was his delight to go with his wife and children to places where nature provided the best of society. In such places he would revel, taking long walks with his family and friends, letting the imaginative part of his being find food and response in the hills, by the sea, and on many a country side. Then, the cares of life, the trammels of the daily duty, and the requirements of the publisher forgotten, he would read aloud the glorious page before him, always with some fresh intonation. If I may dare to add a word I should like to say with deep respect how much he was helped by the companionship of his bright, clever, and affectionate wife, who is now left to bear the great sorrow of her life. Others, doubtless, will state in detail the achievements of Bristowe's career. They are, indeed, well known. Whatever they may cover in recital, they cannot cover all that he has done for medicine and for medical men. They can never reveal the influence which he has exerted on fair investigation or the wide-spread influence of his teaching of the higher class of students during the last four decades. He lived, so to speak, in teaching, in imparting to chosen young men of the

highest aptitude, the results of his long years of observation and experience. His words have truly, in one way or another, gone out to the ends of the earth. A true, generous, and affectionate friend, he has left a void which can never be filled for those who knew him closely. He was *justus et tenax propositi,* and was ever above the *civium ardor prava jubentium.*

W. M. O.

Bristowe as Pathologist and Physician.

In Dr. Bristowe we have lost one of the most eminent of English pathologists and physicians in our day ; a zealous and successful worker in that great task of basing medical science on the solid ground of anatomical fact, which was the main achievement of the generation now passing away. Even if Bristowe's name be not connected with any great discovery, it will always deserve to be associated, like those of Jenner, of Wilks, of Moxon, of Fagge, and others, with this period of English medicine.

In the remarks which, on the invitation of the editors I add to this memorial notice, it will be my special object to dwell upon this side of his scientific character and its bearings on his professional activity.

Of his early life and first scientific work, I, of course, know nothing at first hand, but enough exists in a published form to show what was from the beginning the special bent of his mind. He entered on medical teaching and research with a good intellectual equipment. He had attained distinction as a student in anatomy and physiology, and had a good knowledge of botany—studies which, joined to a natural faculty of observation, and a keen sense of the value of fact, eminently fitted him to become as he did become, a first-rate observer. He was early appointed to a post which he held for many years, that of pathological demonstrator at St. Thomas's Hospital, and soon began to show the value in this field of his special faculties and attainments.

The earlier volumes of the *Transactions of the Pathological Society* give evidence of the nature and value of Bristowe's work in morbid anatomy. With the exception of

Dr. J. W. Ogle, he was the most copious contributor of specimens and papers; his communications and reports numbered in all nearly two hundred, and many of them were of great value. No one better appreciated the importance of that golden rule of the Society that all communications should be accompanied by some material evidence of the reality of the facts adduced.

Often, indeed, such communications are only of ephemeral interest; they have served their purpose when they have been exhibited and criticised, and have imparted their lesson to other observers. But many of Bristowe's observations are of permanent value as being either the earliest descriptions or the best of particular morbid conditions. Having had occasion to go over these volumes more carefully, perhaps, than many people have done, I have been struck by the remarkable accuracy, conscientiousness, and often by the minuteness of Bristowe's observations. Many of them, of course, leave much to be added to, but few show anything to be corrected. Even in a German 'Jahresbericht' (where we do not always find much recognition of English work) I have noticed one of his reports quoted with some such comment as "sehr gut untersuchter und beschriebener Fall" [a case very well investigated and described].

In addition to the faculty of observation and the veracity of mind which they display, there are two circumstances which give them special value. One is that Bristowe saw the importance of the microscope in pathology when it was much less used than it is now. Even in my recollection there have been medical teachers who always referred to the microscope in a tone of banter or sarcasm, and even when this was absent, there was a good deal of scepticism as to its practical utility. I remember one eminent and zealous physician, himself too a skilful microscopist, who held that these things were of no use to students; it was time enough when they had taken their degree. Bristowe, however (influenced partly, as I believe he himself would have said, by the example of George Rainey), threw himself thoroughly into microscopical work, and became an excellent observer with the instrument. Another element in his success in minute pathology was his skill as a draughtsman. It

appears to me, with all submission to better judges of art, that some of Bristowe's microscopical drawings have never been surpassed. His beautiful figure of *Trichina spiralis* (of which, though he did not solve the riddle of the then mysterious organism, he gave a very good description) has been copied into a hundred text-books. And there are other figures which, though the specimens were not prepared with all the modern apparatus of microtomes, double staining, and so forth, are well worth studying. There can be no doubt that Bristowe possessed powers of delineation which, had he preferred art to science, would have made him a very competent, if not a great, artist.

Another point which strikes me in relation to these pathological papers is that in a good many instances they anticipate later observations which have obtained much greater notoriety. It is a curious question why these researches did not attract more notice. It appears to have been partly because the descriptions are short, and not accompanied by explanations or deductions. A certain want of self assertion, combined, perhaps, with a touch of scepticism, seems to have prevented Bristowe from pointing out the conclusions which followed from the facts which he observed, and hence these have not always obtained due recognition. His knowledge of morbid anatomy generally was wide as well as minute, and had he set himself to write a systematic text-book of that subject, it would certainly have been of equal, if not greater, value than his text-book of medicine.

Of the 'Treatise on the Theory and Practice of Medicine,' the work of Bristowe's later years, it is needless to say much, since it is so well known and successful; but it may be permissible to say that what especially commended it on its first appearance was that, beyond any previous text-book, it was based on a profound and practical knowledge of morbid anatomy in the widest sense. It was emphatically the pathological text-book, and this peculiarity gave it a stamp of actuality which so-called clinical manuals do not always display. Moreover, it is a mature work, bringing out the best fruit of the author's immense clinical experience. Though he made it a rule not to quote cases, this practical knowledge underlies all his statements.

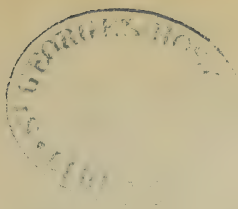
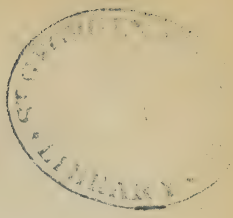
In his clinical work and teaching Bristowe displayed much the same qualities as in his pathological work. His diagnosis was essentially physical diagnosis; there was never any doubt about what he meant; and his logical power, combined with great quickness of apprehension, made him an accurate and often a brilliant diagnostician. As a clinical teacher his reputation displayed a steady rise, which those who were intimately associated with him were able to watch. Out of the pathologist expanded an admirable clinical physician. He was not of the dogmatic school; he had not that unhesitating confidence on which some teachers, and some very good teachers, have based their influence over students and their power of driving knowledge into the uninstructed brain. His tentative and rather sceptical method was sometimes a stumbling block to the weaker brethren; but more intelligent students, and especially instructed hearers, soon came to value the candid way in which the teacher exhibited the workings of his own mind, and the valuable lessons in reasoning and observation thus conveyed. His more systematic teaching was always lucid, and based on such manifold knowledge that it could not fail to be instructive.

Bristowe was, perhaps, not often thought of as a literary physician. Nevertheless, his interest in literature was considerable, and in early life he published a volume of poems, which was, I believe, followed in later years by a second volume. Possibly Nature meant Bristowe to be distinguished otherwise than as a poet; but be this as it may, his prose writing had many merits. Its chief distinction was that it was eminently consecutive; every sentence seemed to follow naturally from that which went before; he saw the end from the beginning, and never lost his way, as even good writers will occasionally do, in a long exposition. There can be no doubt that the lucid and flowing style of his great text-book was an important element in its success.

Bristowe was a man of remarkable independence. The mere opinion of others, apart from their reasons, influenced him not in the least. He never shrank from expressing any view or taking up any cause because it was unpopular, whether with the public or with the profession. If he had a bias, it was likely to be in favour, generally speaking, of

the unpopular view. Of his courage and impartiality in such questions he gave evidence on more than one memorable occasion. Remembering also his perfect uprightness and sincerity, his public spirit, his cordial helpfulness to younger men, I might be tempted to pursue further so grateful a theme. But the limitations of my proposed task remind me that these topics must be left to others. It will be enough for me to have drawn attention, however inadequately, to some features of Bristowe's many-sided activity.

J. F. Payne.

ANATOMICAL AND PRACTICAL OBSERVATIONS

IN

ST. THOMAS'S HOSPITAL, 1674—1677.

By JAMES MOLINS.

With Introduction and Notes by J. F. Payne, M.D.

Introduction.

Hospital reports generally contain the records of cases which have occurred in the hospital during the past year, or at all events quite recently; and this is probably the first time that these or any similar reports have published accounts of cases which were under treatment more than two centuries ago.

The very curious observations which follow were made by a surgical pupil or young surgeon for his own use, apparently without any view to publication. They have, therefore, the merit of being entirely genuine and original, and they speak of persons and things with a frankness which would have been hardly possible in a published work. The MS. containing them is preserved in the library of the British Museum, being a part of Sir Hans Sloane's original collection, which was commenced at the end of the seventeenth century. It is printed precisely as it is written,

some obvious slips of the pen only being corrected; but the curious spelling and the capricious use of capitals have been for the most part retained, as characteristic of the writer and the time.

The writer, like all intelligent students, has not failed to compare his own observations with the statements of text-books, and his quotations from them have been given at length (after careful collation with the originals), as they show what were regarded at the time as standard surgical authorities. Some of these old books may still be found in our hospital library, though they can hardly be the actual copies which James Molins used.

Before saying more about the MS. itself it will be worth while to give a short account of the writer himself, whose private notes have now attained a publicity which he can have little expected.

James Molins belonged to one of those professional families which we so often meet with in the history of medicine. It was a family eminent in surgery through the whole of the seventeenth century, or, in the words of the epitaph of one of them, "his family for many generations has produced men very eminent in the art of chirurgery." The earliest of whom we have any record was James Molines (or Mullins), a member of the Company of Barber Surgeons at the beginning of the century. In 1625 we find him one of the Wardens, and in 1632 Master of the Company.[1] He was also on the staff of St. Thomas's, for we find in the records of St. Bartholomew's Hospital that he was appointed, 20th January, 1622–3, "Surgeon for the Stone to St. Bartholomew's and St. Thomas's Hospitals, at a stipend of £30 yearly, £15 from St. Thomas's and £15 from St. Bartholomew's:—also to be allowed two pounds of towe for every patient for their more easie and warmer drainage."[2] Our own records do not state the precise date of appointment, because the election was deputed to a joint committee of both hospitals, and does not appear in the hospital Court-books.

In explanation of the title given to his office it should be

[1] 'Annals of the Barber Surgeons,' by Sidney Young, 1890, p. 8.

[2] Sir James Paget, 'Records of Harvey at St. Bartholomew's Hospital,' 1846, p. 30.

stated that the operation of cutting for the stone was then, and for some time after, not entrusted to all the surgeons of the hospitals, but only to those specially competent. The "surgeon for the stone" was not necessarily surgeon for general purposes, but sometimes combined both offices.

James Molines was clearly an eminent man in his day, but has left nothing written as evidence of his knowledge. He died in or before 1639; for in the St. Bartholomew's records it is stated that his *eldest* son, Edward Molines, was appointed July 6th, 1639, "Chirurgeon for the cutting of the stone to the Hospitall, with the yearly stipend as his father deceased." There is no corresponding record in the St. Thomas's court-books, but they show that Edward Molines had been *surgeon* to St. Thomas's during his father's lifetime, and he probably now succeeded him as surgeon for the stone.

Edward Molines was a man of a turbulent spirit, and had what is called a chequered career. He was fined for insubordination by the Court of Barber Surgeons. On the breaking out of war between the King and the Parliament he espoused the Royal cause so warmly that he left his work at St. Thomas's and joined the King's army. Ultimately he was taken in arms against the Parliament at Arundel Castle, and in consequence the House of Commons sent an order to the Governors of St. Thomas's to deprive him of his office as surgeon, which was done 25th January, 1643–4. After the Restoration King Charles II sent a similar letter to the Governors to restore his supporter; but the difficulty was that the place had been filled by the appointment of Thomas Hollyer, who had done the work for several years, and whom the Governors did not wish to displace. After prolonged and adjourned discussion the difficulty was solved by making Molines a fourth surgeon, so that there were to be temporarily four surgeons instead of three. But the stipends were to be reduced, so that each was to get £30 per annum instead of £40 as before.

This little episode gives us precise evidence as to the remuneration of the surgeons at that time. It is also interesting as showing the relation of the hospitals to the Crown. We find several instances of letters sent by the

King to the Governors recommending particular persons as surgeon or physician, or sometimes for other offices in the hospital. Although the Crown had no legal power of appointment, such a recommendation had almost the force of a command, and sometimes put the Governors in a position of difficulty. Generally there were long discussions and adjourned meetings ; but in the end the King's choice was acted upon. This was especially the case under Charles II and James II. After the Revolution of 1688 the Crown does not seem to have interfered.

Edward Molines died in the enjoyment of his offices in 1663, and soon after his son James Molins petitioned to the King for a mandamus to the Governors of St. Thomas's and St. Bartholomew's Hospitals to grant him the reversion of his father's place as Surgeon to the said Hospitals.[1] Accordingly on 23rd October, 1663, the King wrote to the Governors of St. Thomas's Hospital recommending James Molins to succeed his father as Surgeon to the Hospital, "he being eminent in his profession and deserving of encouragement." The original letter is still preserved in our archives. There seems to have been no objection to James Molins, and he was forthwith elected.

This James Molins (second of the name) was thirty-four or thirty-five years old when elected, and held the place of Surgeon to the Hospital more than twenty years. He was Surgeon to Charles II and James II, and on the occasion of a royal visit to Oxford in 1681 received the degree of M.D. from the University, so that he was evidently a man of much eminence in his day. He died 8th February, 1686, aged fifty-seven, and was buried in St. Bride's Church, Fleet Street, where a tablet to his memory may still be seen. It describes him as Master of Chirurgery and Doctor of Medicine, Servant to Their Majesties King Charles II and King James II, and adds a statement about his family which I have already quoted. Strange to say, he has been confounded by several biographers (including the learned author of the Roll of the College of Physicians) with his own grandfather.

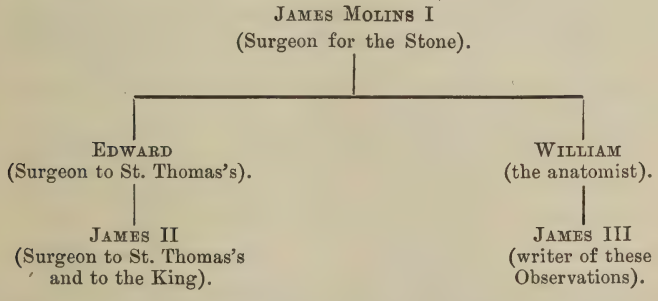
It was not this James Molins, but a cousin and namesake of his, who wrote the Observations which are here re-

[1] 'Calendar of State Papers,' Domestic Series, Charles II, 1663–4, p. 311.

printed. The exact relation of this writer to the family is not quite clear, but I conjecture that it was what I now propose to explain.

Another surgeon bearing the name of Molins, of whom we find records in the seventeenth century, was WILLIAM. He was a good anatomist, wrote a little book about anatomy, and lectured on that subject at Surgeons' Hall. His only connection with St. Thomas's was that we find in 1640 a mention of "William Molins, Barbour-Surgeon," as a tenant of the hospital. From this and other facts it is evident that he was contemporary with Edward Molins, and may very probably have been his younger brother—a younger son, that is, of James Molins the first (Edward being, as above mentioned, the *eldest* son). Now if this William had had a son named after his grandfather and uncle James, he would have been precisely the person to have written these observations. He was cousin, as he tells us, of James Molins, the Surgeon to St. Thomas's; he was the son of a surgeon, and evidently interested in and well acquainted with anatomy; in fact, just such a young man as might be expected to come of such parentage and descent. It is, of course, purely conjectural that this writer was actually the son of William Molins, but this supposition is perfectly consistent with the facts, and in the absence of proof may be allowed to be highly probable.

In order to make this family history clear I will venture to give a pedigree of the Molins family, partly ascertained and partly conjectural.



We will now consider what may be collected about the

actual writer of these notes, James Molins the third, from his own manuscripts. Something may be gleaned which is not without significance.

In the first place it is clear that he was pupil or apprentice of one of the surgeons of the hospital, and very probably of his cousin and namesake whom he so often quotes. If so, the cousin would also be the "master" referred to in the last Observation. The other surgeons at the time were, as I gather, Mr. Hollyer and Mr. William Pearce.

We must not suppose that he was in the modern sense a student of the hospital. The only students at that time were the surgeon's pupils or apprentices. Medical pupils there were few or none. In fact, strange as it may seem to our modern ideas, it was by no means the regular custom for those who were going to be physicians to attend the hospitals. There was no attempt at medical clinical teaching in England, though, as we learn from the St. Bartholomew's records, some few young physicians, having taken their degree at the Universities, used to visit the hospitals for a short time. But we find no mention in the lives of any contemporary physicians of hospital study in London; and I do not imagine that Willis or Sydenham, or any of the great physicians of the seventeenth century, except those who went abroad to Leyden or elsewhere, ever entered a hospital for the purpose of study. It is not till well on in the eighteenth century that we find the surgeon's pupils at St. Thomas's allowed for a small additional fee to attend the medical practice.[1]

At this time the education of physicians and of surgeons was entirely separate; the surgeons learnt no medicine, and the physicians no surgery; as might, indeed, be inferred from

[1] St. Thomas's was at this time the largest hospital in London. According to a return in 1667 the numbers were—

St. Bartholomew's—	*Relieved during the year* .	1383
	Buried	114
	Remaining	196
St. Thomas's—	*Relieved during the year* .	1241
	Buried	144
	Remaining	255

But both hospitals were considerably enlarged by new buildings about this period. —(From Green's 'State Papers,' Domestic Series, 1667 under date April 8th).

a singular story recorded in these Observations relating to the great Dr. Willis.

As a surgical pupil James Molins was, however, a studious and well-educated young man. What his studies were we can form a notion from the volume in which these Observations are contained (Sloane MSS. 3293). It is a book in small folio, nearly filled with notes, all in the same handwriting, and with the writer's name signed in several places. The contents are chiefly transcripts from books made for the writer's own use, according to the following list :

"*A Catalogue of the books I have transcribed.*

"Of the Cautery.
"Of wounds of the head.
"A tretise of Ulcers.
"Of tumours.
"Johannis Arderni translatio.
"Of Osteologia.
"De Musculis.
"De lue Venerea.
"The Index of Diseases.
"The Account of St. Thomas's Hospital Practice and Patients."

The first four of these are from the works of Gabriel Falloppio, or Fallopius, an Italian anatomist and surgeon of the sixteenth century, so that they were not even then very modern. Whether Molins really had any notion of publishing these it is hard to say; but he has written a singular preface, which I insert. It should be noticed that it was written three years earlier than the hospital notes.

"Courteous Reader,

"Accept this Inconsiderate treatise as an "humble oblation of a young Practitioner, one who is so "far from being skilled in the cautioned application of the "Cautery that the very name of Cautery was as difficult for "him to understand as the use of it, both being things "beyond his capacity. Yet encouraging my selfe that as "those who have been well skilled in Chyrurgery were att "first as ignorant as I, untill by their industry and study,

"they despersed those misty vapours of their understandings, "so I (by their example), endeavor to perfitt myselfe in the "knowledge of itt. Thus proposing with myselfe that I (not "being ignorant in all Chyrurgicall denominationes and ex- "pressions) should undertake at the first reading over of "any author, perfectly to understand his true meaning and "method; that this I say would surpass my weake appre- "hension, with little benefit to my understanding. I "judge it therefore much better to transcribe an approved "author [carefully] than to read him over many times. For "by transcribing I engrafted the sense more into my memory. "Likewise I understood the true meaning of every sentence, "and so made those expressions familiar to me, which before "were unknown, and I must ingeniously confess that this "way is laborious, yett that many benefitts that [accrue] "will [repay] the labor and trouble.

"I speake this to young beginners (as my selfe am). "But to those who are well grounded in Chyrurgery, they "will gain as much by once reading an author as a young "beginner shall in 3 or 4 times. In these following Trea- "tises are found many errata, which may be excused "through the indiscretion and the inability of the tran- "scriber,

"Who is
"Youre Loving Friend,
"James Molins.

"January the 1, 1671."

The translation of John Ardern's book does not appear; but, as will be shown below, there is something which suggests that it was well known to the writer. The anatomical chapters on bones and muscles, &c., are not of much importance, but they are introduced with a curious invocation to the reader.

"If yee doe not despise the Curiouse study of Anatomy, "or if yee delight youre selfes in the Science of Physick or "Professions of Wisdome, I assure you that the subject of "this treatise is not to be despised."

The rest of the volume contains nothing important, except the Observations on St. Thomas's Hospital.

This record of an industrious surgical apprentice's studies and observations will give us some notion of what surgical education in those days consisted in. Apprenticeship with practical instruction of an informal kind was, of course, the backbone. There were no lectures on surgery, or, indeed, on any other subject except anatomy. The anatomical lectures at Surgeons' Hall had a great reputation, and though they would doubtless seem superficial to us now, were systematic, and illustrated by careful dissections—dissections, that is to say, made by the teacher, not by the pupil. There is no record of students dissecting regularly, and the regulations quoted in our Calendar about students not dissecting bodies without permission of the Treasurer probably referred to post-mortem examinations. The anatomical lecturers at Surgeons' Hall were generally Doctors of Medicine, Fellows of the College of Physicians, and some of them were of high repute, but they represented the whole anatomical teaching of London. Surgeons were strictly forbidden to dissect elsewhere than at the Hall, and a breach of these rules got the great Cheselden into trouble with the Company. It was not till the beginning of the next century that he introduced anatomical lectures in the hospital.

Besides these lectures, there was no means of learning any branch of medical science except from books, and books were therefore more important then than they were later. It will be noticed that Molins quotes from no English writer; the fact being that at that time there was no text-book of surgery worthy of the name written by an Englishman, and the English anatomical text-books, though several existed, were mere compilations. Even the pretentious work of a surgeon of St. Thomas's, John Browne, called *Myographia*, published shortly after the date of these Observations, hardly deserves a better name. For all surgical literature we were dependent on foreigners.

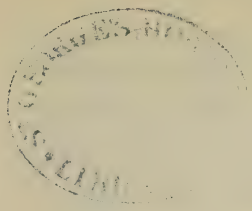
James Molins, at all events, seems to have made the most of his literary resources. He was a diligent reader, and brought his readings to the test of fact. If we assume that he possessed in addition the practical skill which was an inheritance in his family, he must have been a young man of great promise, and one wonders he was never heard of

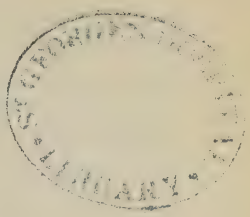
again, favoured as he was also by circumstance and connexion. Perhaps the least welcome explanation may be the likeliest, that he died young.

> "But the fair guerdon when we hope to find,
> And think to burst out into sudden blaze,
> Comes the blind Fury with the abhorrèd shears,
> And slits the thin-spun life."

Possibly, however, he lived and flourished in a less conspicuous position than that to which his talents and his family connexions might have been expected to raise him.

J. F. P.





ANATOMICALL PRACTICALL OBSERVATIONS

IN

ST. THOMAS HIS HOSPITALL.

PER ME J. MOLINS.

July 14th, 1674.

1. A Shoemaker aged about 40 yeares of Age received a great Contusion on his leg, he lying in the cold it mortifyed. I made large scarifications and applyed good warme Medicines to the part and in 3 weekes he was cured.

2. A maide aged 25 yeares laboured under a large Impostumation *in Inguine*. I discharged the matter and laid the Cavityes open both upon the Abdomen and the Thigh. She was cured in a month's time; she was not able to goe when she came into the House but upon this Discharge she went as well as ever she did.

3. A Servant Maide aged 21 of an Ill habit of body and red-haired, with a suppression of the Menstrue, came in with a Mortification upon her leg about the gartering place. (her Mrs. attempted to make her an Issue in the part by a Spanish Fly, and there came down such a Defluxione that it caused with the paine, mortificatione). Wee scarified and used our usuall method and checked the mortificatione. When the sore was almost cured, the Doctor gave her a

Vomit and some other things which disturbed the Humor soe much that her sore flew out againe almost as bad as ever. With much adoe wee brought it to digest againe and upon the second healing she fell into a feaver which had like to have killed her, but it pleased God that she recovered, her sore healed, and she turned out of the House well.

September 14th, 1674.

4. Dr. Willis's[1] Coachman's wife by Violent Coughing distended or broake the great Artery. The Artery by Degrees and its continuall Pulsations worked through the upper part of the sternum and dilated it's self in the Skin to the magnitude of a man's fist. She went to Dr. Willis, who told her that it was a Wenn, and ordered something for her at his Apothecarye's, which was nothing else than Paracelse[2] and Bole mixed together but she found no benefitt. She went to severall persons, and at length she litt on one who attempted to open it and he making his Incision just through the Skin discharged only a little Serum, and told

[1] Dr. Willis was the great Thomas Willis, eminent for his anatomical and physiological researches on the brain, the discoverer of saccharine diabetes, and one of the greatest names in English medicine. He had been Professor of Natural Philosophy at Oxford, but in 1667 had come up to London, and was now in large practice, the leading physician of the day. Notwithstanding all this, he does not seem to have recognised a pulsating aneurism when he saw it.

The following works of Dr. Willis are in the St. Thomas's Hospital library:— 'Opera Omnia,' quarto, Amsterdam, 1682; 'Pharmaceutice Rationalis, or an Exercitation of the Operations of Medicines in Human Bodies,' London, 1684.

[2] *Paracelse* was a plaster, probably the *Emplastrum stipticum Paracelsi*, which is recommended by Woodall in 'The Surgeon's Mate' (1639) as one of the first requisites in the surgeon's chest. Woodall does not give the composition, but there are several prescriptions for plasters in 'Paracelsus's Surgery' ('Die grosse Wundartzney,' Ulm, 1536, folio). That which the author praises most was composed of beeswax, colophony, and cobbler's wax, with which were blended gum ammoniacum, bdellium, amber, and powdered magnet (magnetic iron ore). This was so powerful, it could draw an arrow-head out of a wound! Another receipt for Paracelsus's plaster, in 'Schroder's Dispensatory' (London, 1669), gives besides gums, &c., mummy, loadstone, white and red coral, with a number of other ingredients. *Bole* means Bole Armeniac, a reddish earth brought from Asia Minor (originally from Armenia), which was used as an astringent externally and internally. (Two editions of Woodall's 'Surgeon's Mate' are in the Hospital library, viz. 4to, London, 1617; and folio, London, 1639.)

her that now he had made a vent and nature would throw it out and she would doe well. The woman was very much encouraged by this Advice but finding the Consequence prove to the Contrary, she complaining of much paine, besides despairing that she should ever doe well reduced her into a Consumption. The woman came one afternoon to my Coz. J. Molins, and there was Dr. Torlesse, Dr. Brady, and Mr. Carew, and I. The woman showed her Tumor which had a little excoriation on the top of it and looked as though there was a Slurfe, which was the very externall Coate of the artery with a great Pulsation upon a vein. Wee told her that it was Immediate Death whenever it was opened, and withall desired her that whenever it breake she would send for my Couz. and he would doe the best he could for her. Away she went but her paine continuing rather more than ever (for it had continued upon her above a yeare and a halfe) she went to one Wakeman a Chirurgeon, who attempted to pull off the Slurfe and in pulling off the Slurfe proveing as wee supposed before to be the coate of the Artery, immediately followed a great Flux of blood. Itt flew out in a streame as big as a Man's Thumbe, and leaped and spouted as if it came out of a Fountaine. Immediately he compressed it with his fingers and Thumbe, and applyed his Calchanthum[1] to itt with a hand pressing upon it, continually renewing his Stupes diped in Rosat. At this rate it was stopped for 7 or 8 houres, then it flew out againe as before, he made a Shift to stop it for some time, yet still with a greate losse of blood and the third Flux which was within the 24 houre she Dyed. After she was Dead, my Couz. haveing made his Interest, had the conveniency to open her. Her Case was thus: in the upper part of the Artery was contained Grumouse blood; the Sternum was Perforated through the Cartilaginous part of it, and the adjacent bones foule (by the lodging of the coagulated blood). The Artery (which was a branche of the Ascending Trunke of the great Artery) was dilated to the magnitude that it

[1] *Calchanthum* = Chalcanthon, flos æris, flower of copper, properly the scales which fly off when red-hot copper is quenched in water; but also meaning vitriol, green or blue, sulphate of iron or copper, which were used as styptics. *Rosat* means probably Oleum Rosatum, or oil of roses, also regarded as a styptic.

would containe an egg; rather bigger than that which Riverius[1] gives you account of in his observations (where he treats concerning an Aneurisma) and dilated very largely in the Right Ventricle of the hearte; the coate of the Artery was very thick and in some places cartilaginous (like little flakes of Ice). Ambrose Parey (Lib. 7, Cap. xxxii)[2] treating of an Aneurisma gives you this Deffinition that "An Aneurisma is a soft tumor yielding to the touch, made by the blood and spirit poured forth under the Flesh and muscles by the Dilation and relaxation of an Artery. Galen calls an Aneurisma an opening made of the Anastomasis of an Artery. An Aneurisma may be made when an Artery that is wounded closeth too slowly. The substance which is above it being in the meanetime agglutinated, filled with Flesh and cicatrized which doth not seldome happen in opening of Arteryes unskillfully performed and negligently cured. Therefore Aneurismas are absolutely made by the anastomasis, springing, breaking, Erosione and wounding of the Artery. These happen in all parts of the body but more frequently in the throate, especially in women after hard travaile. * * * The Cause of such a bony Constitution in the Arteryes by an Aneurisma is for that the hott and fevered Blood first dilates the coates of an artery, than breakes them, which when itt happens, it then borrows from the neighbouring bodys a fitt matter to restore the loosed continuity." Thereof Joannes Johnstonus in *Idea Medicinæ*, (Lib. 6, Cap. viii, page 288)[3] dixit; "*aneurisma est tumor ab arteriæ tunicæ*

[1] Lazare Rivière, or Riverius (1589—1655), was a famous French physician and professor at Montpélier. He was one of the first teachers who combined the "Spagirical" or chemical therapeutics with the older "Galenical" methods. He wrote 'Praxis Medica,' 'Observationes Medicæ' (containing some hundreds of cases), &c. These works were extremely popular, and some were translated into English. Several may be found in the St. Thomas's Library.

[2] "The works of that famous chirurgeon, Ambrose Parey, translated out of Latin and compared with the French by Tho. Johnson," folio, London, 1649, p. 224. [St. Thomas's Hospital Library.] The standard text-book of surgery in the seventeenth century.

[3] 'Idea Universæ Medicinæ practicæ,' 8vo, Amstelodami, 1648. John Jonston (1603—1675) belonged to a Scottish family resident in Poland, and was born there. He studied philosophy at St. Andrews, medicine at Leyden and other places, including London, which must have been in the time of Harvey, but returned to the Continent and practised in Poland. He was a man of immense

"*interioris apertione, exterioris, dilatatione exortus. Cogno-*
"*scitur quod sit tumor mollis, pulsans digitis plerumque cedens,*
"*et si non cedit, nec pulsus est quod in magno accidere possit,*
"*tamen strepitus quasi bullientis aquæ ob spirituum per an-*
"*gusta meatum percipitis. Et sic ab Ecchymomate distin-*
"*guitur, Oritur vitio arteriæ, quæ ratione tunicæ internæ*
"*quæ dura et crassa aperitur; ratione externæ, quæ tenuis,*
"*mollis, et rara, dilatatur. Id fieri solet vel a sanguinis*
"*impetû vel ab aliquâ violentiâ, sæpissime cum vel arteria pro*
"*venâ secatur, vel cum vena simul arteriâ lœditur. Tum*
"*enim exteriore tunicâ utpote molli et venarum tunicis cognatâ*
"*coalescente, internâ apertâ, per foramen sanguis et spiritus*
"*erumpere conatur et externam distendit.*"—Per me J. Molins.

October 25th, 1674.

5. Mr. Bostock aged 40 labouring under the King's Evill from his Childehood, it had broke out in severall parts of his body before, and part of the *Os femoris* had formerly been exfoliated; att length jumping out of a coach he sprained his ankle, and the Humors falling downe fixed there and came to an Œdematouse Tumor. Many for the space of 3 yeares had him in hand; they had claped on the Caustick and given a very good Discharge and thrown in their Injections, but all to noe purpose for the space of 3 yeares or more, untill he was extenuated very much by the large Discharge of the matter and the Vehemency of the Paine. At length he condescended to loose this troublesome Member and my father was picked out as the operator; all things being provided according to the old authentick way, a Person steps up and objects against it and nothing must serve the

learning, and wrote many works in Latin on philosophy and science as well as medicine. The best known was his 'Natural History,' in six folio volumes (Frankfort, 1650, &c.). Several of his works were translated into English and other modern languages. The work here quoted is a compendium of the whole of medicine for the use of students. It seems not to have been so widely known as others of his books, and is somewhat old-fashioned for its date. In the quotation above it is noticeable that a "noise like boiling water," *i. e.* a "murmur," is given as a sign of aneurism. This, which is mentioned by Ambrose Parey and others, was one of the earliest applications of auscultation to diagnosis.

turne but the *Aqua Regalis Stiptica*[1] must be applyed to the Stumpe. It was agreed on more by the desire of the party himselfe and his friends than by the free consent of the Chirurgeons that were assistants. This scruple being solved wee went about the Operation which was done very expeditionally and cleverly and the gentleman underwent it courageously. The water was applyed but tooke no effect as was presupposed, but after a short time, over the Rag that was dipped in the water he claped on the bladder, and rowled it pretty straight and even and laid him into his bed. He had upon him before he lost his leg a violent Cough ; he complained of a violent burning pain at the end of his Stumpe. Per the night he had a Narcottick, and he rested very well, better than he had done by his owne Confessions in 3 yeares before. Thus all things came on very well, we had an Ichor come away which gave a breathing to the Stumpe. Wee had nothing stirred, but a discharge of bloody Ichor, which is usual ; he was drest up very warm with a good Digestive ; there was upon his knee a little Impression of the Rowler, though he had a good Defensitive Plaister on his knee. In a matter of six Dayes time wee had indifferent good Digestions, yet still his stomach failed him upon the seventh Day ; he had little vomitings and inclining to a Feaver, and that which was no more than Ecchymosis all the last weeke turned to Mortificatione. This made us more fearful than ever. The Mortificatione on the knee was scarified, yet the Stumpe continued Florid and some small quantity of matter came away, all which gave us some hopes. This mortification in some short time digested, the Slurfe began to cast off the Stumpe indifferently well. Thus were we wavering, hoping that nature would have helped us and he remaining very weake still growing worse and worse in his body, till the 20th Day, and then his Stumpe runn but little, the matter reverst into the habit[2] and flew out in an Aphtha and on the 24th Day he Died.

[1] This name does not occur in the 'Pharmacopœia Londinensis' of 1662; it was probably some empirical or secret remedy.

[2] *Habit* properly means the general state or condition of the body, but was used by surgeons at the time much as we now use the word "system." The meaning is "the pus was absorbed into the system." *Aphtha* probably means some sort of eruption.

6. William Watton a young Fellow at the Hospitall labouring under a Feaver with a loosenesse, at length it terminated in the left buttock in a large Imposthumation which breake of itself before we knew of it. One Day being called I layed the part open indifferent largely and drest up warme the next Dressing I found the Musculous Substance underneath mee very foule, all the adjacent parts loose, and the matter lodged underneath mee under the Glutei. I clap'd him on a good warme Dressing and a Bolster under the depending part, and rolled him up with a good warme Stupe. In some time his feaver abated, his loosenesse went off, and as the adjacent parts mundified soe it incarnated, and in less than 6 weekes he was perfectly well.

December, 1674.

7. A middle-aged Seaman having an Impostumation on his knee from a former Contusion it breake of itselfe before he came into the Hospitall, when I saw it immediately I layed itt open obliquely—very largely it being only Cutaneous, and in a month's time was well.

8. A Fellow came in on our Day that had an œdematouse Tumor in the foote, but had formerly been Salivated by a Physician in the country which had checked the matter and eased him as long as the Salivation continued, but when once it stopped he fell into violent paines especially in the Night and he had no ease till it flew oute into his foote at which place Nature disburthened herselfe. The Fellow found reliefe, but still it runn very much, the bones of the foote foule. Wee advised to loose his Member but he was unwilling. At length he had the Small Pox which killed him.

9. An elderly Man haveing a large Ulcer upon the Os Tibiæ for many yeares came to be cured and as wee healed the ulcer he fell sick then we lett it alone and Nature discharged herselfe and heal'd it againe and he fell into a loosenesse. At length we turned him out uncured.

10. An old Man a Sawyer by Trade having a Contusion upon his Skin there threw out such Fungous [Granulations]

that all the Escharotticks that we applyed signified nothing ; but still it flew out upon us againe and at length we applyed Aq. Cœrulea[1] and Cured him.

December 7th, 1674.

11. One aged 45 yeares laboured under a Fistula *in ano*. He was Mr. Peirce's Patient ; sometimes vomittings, suppression of Urine, Gripes, and his ordure came away involuntarily ; when the Fistula runn he was better ; then when it stopped he was as before ; at length he Dyes. After death Dr. Paulis and I opened the Body. His Belly was very much Distended. After I had raysed the skinn I tooke off the sternon. The Lungs large and discouloured as in persons that dye suffocated, and no adhesion on the Pleura. The heart large faire and good and no Quantity of water more than its usuall serum. The Diaphragma was protruded upwards by the large Distentione of the Intestines above a foote. The liver large and good the Vesicula Fellea large and oblonge, differing from its own Pirademicall forme ; the Spleene naturall. The Ventricle naturall and much contracted, the Small Intestines naturall both in bigness and colour. The Cæcum we found naturall but two valves ; the Colon and Rectum prodigiously dilated with wind. At the Anus we found a multitude of blinde Hemerhoids, spongy and relaxt, which I doe suppose was the Cause of the involuntary comeing away of his Ordure. The Externall Sinus perforating the Anus; little Callosity, but the Anus discoloured. The Kidneys faire and good. The Ureters free without obstructions, for we threw our Injection freely through both ureters into the bladder ; the Bladder contracted, good and naturall. The Doctors' opinion which I apprehend was very rationall was this : That the Spongy Piles did attract a continuall afflux of Humors, soe that weakened him, and upon the reverse of this matter into the blood, it hindered the separation of the internall parts, and made him labour under all the precedent symptomes, and in Conclusion Death. He found a great Deale of Benefitt in Troch. Gordonis.[2]

[1] *Aqua Cœrulea.* This is not in the Pharmacopœia. It was probably a lotion of blue vitriol or sulphate of copper.

[2] *Trochisci Gordonii,* the noted lozenges bearing the name of Gordon of

12. A Boy aged 10 yeares old laboured under a large Impostumation in his right Thigh being the Termination of a Precedent Malignant Feaver, this possest the whole Thigh. I discharged all the dependent part under the Ham betweene the two Tendones, we had a large quantity of fœtide Matter every Dressing. The Bone of the Thigh carious. After some time I clapped on the Caustick largely on the middle of his Thigh in the thinest place, and I went boldly to the Superior Orifice. We had a Discharge the next Dressing and in a month's time all dryed up and seemingly well. The Boy came to his Stomack and would goe, and his leg grew strong.[1]

December the 18th.

13. A Middle aged Man seemingly Hydropicall was admitted into St. Thomas his Hospitall as the Drs. Patient; sometimes he was better and sometimes worse;—an Intermissione pulse; Asthmaticall, and Obstructions in making water; jaundice, his legs and armes swelled; and 2 Dayes before he Dyed a totall suppression of urine. After he was Dead I opened him, opening the lower venter, which seemed but very small, considering him Hydropicall. Wee found noe quantity of water, but what was usuall, the Liver Schirrhous and præternaturally large, the kidneys and all other organs sound. After I had taken up the sternon I had a large Tumor underneath mee *in Pericardio,* and a large quantity of water contained, as I suppose to a Pottle It was of a yellowish Colour; the Heart as long as a Bullock's; the right Auricle very largely distended. Upon the opening of the Auricle I founde a large yellowish viscouse substance expanded over the whole Auricles. It had no particular adhesion but from its common membrane; the same substance was also in the right and left ventricle of the Heart, but none in the left Auricle; but that was naturall

Montpélier, a physician of the fourteenth century. They were composed of twenty-six ingredients, beginning with "the four greater cold seeds," viz. seeds of cucumber, gourd, melon, and water-melon; including also Bole Armeniac, dragon's blood, ashes of ivory, myrrh, &c. To which of these ingredients they owed their virtues it would be hard to say.

[1] "Came to his stomack" = regained his appetite.

both in its colour, shape and largenesse; the substance of the heart naturall. The Lungs very small, in their colour like the spawne of frogs, and a general adhæsione to the Pleura. Nothing else observable but in the raiseing of the muscles of the Arme and thigh a discoulour'd serum contained betweene every Interstice. Of this substance that I tooke out of the heart which look'd and shined like fatt yet left noe unctuocity upon the touch, I put one piece upon a Coale of Fier and it shrunk up to a Coale, I put another piece into a Skillet, and boyled it for a considerable time and at length it came to a substance like White leather, a third Piece I keepe in my Pocket, to see what the warmth of that would produce. And I found it turne to the same Substance as Snot or Fleme would when it was dryed. The biggest Piece (which I took out of the right Auricle) weighed oz. 11 wanting a ʒi. I put it into a cleane Porringer, and exposed it to the Ambient air, and that shrunke away to a skinn.

As to the Deffinition of the Dropsy, in Latin *Intercus*,[1] in Greek *Hydrops, nomen Sumpsit ab aquoso humore cutis; Aqua Intercus.* According to Ambrose Parey (L. 8 : Cap. xi : Page 299,) the Dropsy is a Tumor against nature by the abundance of a waterish Humor of a Flatulency or Flegme, gathered onewhile in all the habitt of the body, otherwhile in some part and yet especially in the capacity of the Belly betweene the Peritonæum and the Intestines. From this distinction of places and matters there arises divers kind of Dropsys (one as to our purpose among the rest *Pleurocele* and *Hydrops Pericardii*). Yet they all arise from the same cause, that is the weaknesse or defect of the altering or concocting faculties especially of the Liver which has been caused by a Skyrrhus or any kind of great distemper chiefly cold, whether it happen primarily or secondarily by reason of some hot Distemper dissipating the native and in-bred heate. Such a Dropsy is uncurable, or else it comes by consent of some other higher or lower part: for if in the Lungs, heart, midriffe or Reines there

[1] *Intercus.* This extraordinary word does not seem to be found in any Latin dictionary or Latin medical work; but the meaning is plain enough: *aqua inter cutem*, water in the skin, dropsy of the subcutaneous tissue, or anasarca.

be any Distemper or Disease bred it is easily communicated to the Gibbouse part of the Liver by the branches of the Vena Cava which runn thither (as in this person the Vena Cava was very largely distended especially in the Ascendent and Descendent part of it from the liver) but if the mischiefe proceede from the Spleene, Stomacke, Messentery, Guts, especially the Jejunum and Ileon, it creeps into the Hollow side of the Liver by the Meseraicke Veins and other branches of the Vena Portæ, for thus such as are troubled with the Asthma, Ptysicke, Spleene, Jaundice and also thee Phrensey fall into a Dropsy: Joannes Riolanus[1] (*Lib.* 3 *Cap.* 8 *De Corde et page* 301 *in Consideratione Medica*) *Dixit* "*sœpe mentitur et præ se fert speciem apoplexiæ, sed sine stertore nec relinquit post se Paralysin vel Paresin. Si sœpius fortior recurrat, tandem cor obruit et suffocat, non tantum ob interceptum sanguinis excursum, ex plenitudine vasorum, sed ex oppressione cordis, ab aliquâ crassâ substantiâ sanguinis, intra ventriculos cordis impulsâ, quæ ἀσφυξίαν adfert in motu cordis et arteriarum; interdum ἀφασίαν; tandem interitum. Hic affectus Germanis æque familiaris ac apoplexia, ex athletico corporis habitu qui contrahitur ex comessationibus et perpotationibus assiduis potissimum in prandio quod protrahitur in horas nocturnas; nec tamen curant istum habitum plethoricum exsolvere venæsectione liberali. Nec mirum si a tantâ sanguinis copiâ incidant in apoplexiam vel syncopen cardiacam. Frequentius obstruuntur ventriculi et septum medium dum replentur frustulis carneis vel adiposis quibus cor suffocatur interceptâ circulatione sanguinis. Interdum hœrent in auriculâ dextrâ et palpitatio aut pulsûs inæqualitas vel interceptio sœpius accidit. Intercipitur circulatio non tantum in corde sed etiam in venis ubi obstruuntur a crassiore sanguine, vel*

[1] 'Encheiridium Anatomicum et Pathologicum,' a Joanne Riolano, 8vo, Lugd. Batavorum, 1649, p. 225. [St. Thomas's Hospital Library.] Jean Riolan the younger (1580—1657), an eminent physician and anatomist, was Professor of Anatomy and Botany in Paris. Though he did good work in anatomy, he was an obstinate opponent of the doctrine of the circulation. Harvey published a reply to Riolan's objections, in which he speaks of him as "the Prince of Dissectors of Bodies." He wrote a large work on anatomy ('Anthropographia'), and the smaller book here quoted, which was translated into English by Nicholas Culpepper, with the title 'A Sure Guide to Physick and Chirurgery, &c.' (folio, London, 1671 and earlier).

concreto instar medullæ sambucinæ, ut mihi sæpius apparuit post febres ardentes, et annotatum a Fernelio."

14. A young man having a stone thrust forward into the meatus urinarius it lodged just under the frænum, and striving to take it out with the extractor, it was so bigg that it could not come out. At length my Couz. cut it out; the part was much swelled and putting back the Præpuce further than ordinary it bound soe behind that it had like to have mortifyed the gland and all that was before it. I cut the Phymosis and he did well, but the urine runs out where the stone was cut out and I believe will doe soe all days of his life.

15. *The Woman's Case in Bloomsbury, January the 4th, 1674-5.*

Labouring under the Dropsy ever since Bartholomew tide last past (the first Cause of her swelling was as she supposed from a bruise on her Belly) at length she came to my Couz. James, who advised her to be tapped to which she willingly condescended, which he did with his own Instrument to witt with a Canula, at the end of which was skrewed in a blunt-pointed Lancet yet so as it penetrated with little or no paine. He made the Paracentesis 5 times and at every time discharged a gallon and a halfe of water or rather more. The woman was very Couragious and Hearty but as the water was discharged she was troubled with a difficulty in breathing which was from the relaxation of the Diaphragma. The serum which was discharged was thick and yellowish. Every time she was tapped, a new aperture was made: at length she Dyed. When we came to open her we examined the Abdomen by compressione which felt as when she was alive, that is, Indurated and Knotty. When we opened the Belly we found all the muscles sotten and the Omentum preternaturally tumifyed which had Glandulouse Swellings and Adhæsione of it to the Peritonæum; the Cavity repleted with large tumors of the Glandules; and various Cystes, depleated with a Mucaginouse matter: But one particular Cystis above the rest as big as a peck; wee tooke this out as carefully as possibly wee could, with all the adhering parts and in the separatione of the part, wee found him adhere to the Matrix. Wee tooke out the

Vulva and the Vagina Uteri along with it, and found the whole body of this large Tumor to be contained in the right Cornu Uteri. When we came particularly to examine it it had its intire Tunicle from the rest, and had in itt Thousands of the former Hydatides; wee guest it to weigh thirty pound. The Liver preternaturally large and Skyrrhus; the Bladder of Gaule was very largely distended; the Intestines all corrupted; the Matrix and Vagina sound and firme, and the left Cornu Uteri naturall; the Kidneys sound and good which are, as I may confidently affirm, soe in all Hydropicall persons. The Thorax repleted with water, the Lungs discoloured and wasted, the Hart though small yet firme and sound, and in its pericardium its naturall quantity of water, the Spleene large and somewhat discoloured. One thing I had allmost forgott which was that before she Dyed the last time she was tapped no water would runne which as afterwards wee found, was that all the liquid extravasated serum was discharged, and that which was contained in its peculiar Cystes could not be discharged. Another Remarque was that upon Incisione of the Skinn on the Tibia it cut like fat, which was nothing else than as all parts being repleate with the Lymphid matter, soe all the Glandules of the body were repleate with it; for it was acknowledged by many authors that every Pore hath its several glandule which was evident in this woman, excepting the glandules in the Breasts, which were totally dissolved that the bare Skin and nipple only appeared. As to the cause of this, I can only say *Quot homines tot sententiæ*. Yet I must thus far allow, that it is from an ill separatione in the habit, that cannot discharge that Lymphid matter but throwes it downe soe much upon the Lymphæ that cause him to dilate himselfe into soe many particles, and as wee acknowledge that he divaricates himselfe into every particular part soe he is particularly dispersed and dilated everywhere where he runs. That which was conteyned in its Cystis (which I take to bee nothing else than the Dilatation of the Lympha) cannot be discharged but that which is extravasated may be discharged. In order to what I have said look but into Barbette's Practice with Dr. Decker his Annotationes[1] (Cap. 4th, Lib, the 4th,

[1] 'Praxis Barbettiana, cum Notis et Observationibus Frederici Deckers,' 12mo, Lugd. Batavorum, 1669. [Edition of 1678 in the St. Thomas's Library.] Paul

page 158, De Hydrope) ibi Dixit. "*Hydrops est Collectio* "*præternaturalis Lymphæ seriosioris. Alii definiunt per* "*tumorem Corporis vel partis ejus preter naturam ob Humoris* "*aquosi, et serosi vel flatus Collectionem exortum; hujus* "*affectus descriptionem accuratissimam videris apud Hippo-* "*cratem* (*Lib.* 4 *De Morbis,* Text 33 and 34, Page 158, ad finem hujus libri).

"(2) *Pars affecta est Abdomen aut sæpe totum corpus omnesque ejus partes.*

"(3) *Causa proxima est Lympha serosior quæ tenellula sua vasa erodens, et sic extravasata gravissimum hunc morbum ægris infert. Et acrior lympha nam serosiora quâ serosiora non tamen erodunt sed quidem distendunt: distentioneque nimiâ vasa illa tenellula lymphatica rumpuntur; præcessâ prius* (*quantum ego observare potui*) *glandularum vasorum lymphaticorum obstructione, sicque nimis copiose effluit lympha, hydropemque excitat. Remotæ causæ variæ sunt, ut apud auctores est videre; inter quas sæpissime occurrit nimius spiritus vini usus imprimis matutino tempore assumtus, unde plerumque primo leucophlegmatici fiunt deinde ascitici; hocque fieri puto, quatenus vini spiritus famem* (*acidum ventriculi fermentum, sua volatilitate oleositate et pinguedine, ut patet ex flamma quam concipit spiritus vini, obtundendo et infringendo*) *aufert. Fermento acido ita obtuso, alimenta in ventriculo fermentari atque ab invicem sufficienter segregrari nequeunt, unde crudus atque corruptus chylus necessario producitur. Adde quod illi Lenæi heroës matutino tempore hoc spiritû vitæ* (*potius tum mortis*) *ita ingravati, propter fermentum obtusum vel extinctum nihil fere nec appetunt nec comedant, sicque cum Cerere divortium faciant. Sed ratione acrimoniæ salsæ quæ est in vino adusto* (*ut patet ex siti subsequente*) *vehementer sitiunt; unde jugiter ad tollendam illam acrimoniam bibere coguntur, sicque toto pomeridiano tempore non Cerealia sed Bacchanalia celebrant; quo fermentum forsan in ventriculo, relictum, diluitur*

Barbette, born at Strasburg and educated at Montpélier and Paris, practised at Amsterdam with great renown in the seventeenth century. He wrote works on medicine and surgery which, without being original, were extremely popular. His 'Surgery,' written in Dutch, was translated into Latin, German, French, and English. His 'Medical Practice' here quoted was less widely known, but was also translated into English. In fact, he seems to have been a great authority with the medical profession in England.

abluiturque continuo illo potû nimio, sicque flaccidior ineptiorque ad concoctionem redditur stomachus ; deinde cruditates augentur, minus laudabilis generatur chylus. Non potest non inde generari sanguis crudus serosus, pituitosus aliâve qualitate vitiosus ; unde nutritio lœditur, obstructiones oriuntur, etc. ; sicque illi Bacchi heroës Charonti aliquando traduntur.

16. A Ship boy falling downe the side of a Ship, upon the Stocke, in his fall he fractured one Arme, his Right Thigh and the left had a compound fracture. After they kept him att Woolewitch 10 or 12 weekes, they sent him up to the Hospitall. I layed the part in a goode positione, wee had a very large Discharge of matter and the bone bare, yett for all this he had the Small Pox, then the matter stunck worse than itt did before and its colour was greene. The Pox rise to an Indifferent Height butt in 6 or 7 dayes they fell and he Dyed.

February the 4th, 1675.

17. The Porter haveing aboute a yeare before laboured under a fitt of sicknesse which terminated in his thigh and leg and Imposthumated ;—which was discharged and incisione made according to Interstices of the Muscles, for the discharge of the matter. Upon the healing up of this he complaines of a great paine in his breast, and a violent cough which I suppose was the metastasis of the matter upon the Lungs, he spitt and expectorated a nasty fœtid matter, consumed, and in conclusion, Death. Afterwards I opened him. Upon the opening of the Thorax, there was an adhæsion of the Lungs near the Pleura and a large quantity of serum ; in the lower Belly, little or none : I tooke all oute from the Clavicle to the Anus and laid them upon a table in plane. Upon the taking up of the Sternon, between the Mediastinum and Sternon was a Pus collected very frothy. The Lungs full of hard glandulouse knobs, Imposthumated and Mortifyed, especially towards the upper part of them where I suppose the matter first seized, for the lower part of the lobes of the lungs were indifferent sound. Upon the compressione of the lungs the matter came through the divaricationes of the Trachæa. His Hart externally faire good, but in the right ventricle we found a viscouse small substance,

nothing nere so large as the last which I found, this being noe bigger than the little finger either in length or thicknesse. Its Pericardium firme and sounde with its naturall quantity of water contained. The Liver præternaturally distended in its Parenchyma, and Skirrhus, the Vesicula fellea large and repleted with a thick viscouse Choler. The Stomack and Intestines Infirme, the Kidneys and the Spleene sound.

February, 1675.

18. A woman labouring under Convulsione fits threw herselfe into the fire and lay there untill she had burnt up one of her hands. She was brought into the Hospitall. She lost the Digiti but we saved the Metacarpi and in 10 weekes she was well.

19. A young woman labouring under a large Mortificatione in her leg. We drest her up very warme, stopt the mortificatione, digested the eschar and healed her up.

20. One Saturday being the 20th of February, 1674-5 a Serjeant being very consumptive for a greate while, att length dyed. I opened him and in the superior part of the Left Lobe of the Lungs was a large Imposthumatione, most part of the Parenchyma wasted, and the remaineing part full of matter. The right lobe glandulouse and in each of these there was found more or less stones of a firme solid substance. In the Hart the same viscouse substance as in the last; the Liver sounde and the other viscera indifferent except the Spleene and the Mesentery; the one I tooke severall small round stones oute of, and the other full of glandules.

March the 20th, 1674-5.

21. One Mr. Coope a Chyrurgeone, aged neare an 100 yeares. Laboured under the Dropsy, and haveing had it aboute a yeare and a halfe, att length dyed. He was very much tumifyed. I opened him and found the Lungs faire and naturall. The Hart goode, but a substance like fatt aboute itt. An indifferent quantity of water in Pericardio. The Liver the best, butt the least that ever I see in any Hydropicall person. Its color and Parenchyma good and naturall, the Spleene præternaturally distended, in its sub-

stance discoloured, in its colouring white and its substance naturall. The Omentum throwne or contracted under the Stomack by the quantity of water (which was aboute 5 gallons) itt was discolored in its substance and rowled up. The Intestines discolored and the Mesentery glandulouse where itt encompassed the gutts. The body of the Mesentery thick, and repleted with Lymphæ. There was a large Perforatione through the productione of the Peritoneum in scroto (which accidentally happened by a wound formerly in scroto), and through the testicle which caused the loss of itt. This case may properly come under the name of Anasarca, because itt was totally dispersed through all the body. Through age his Beard was growne blew.

22. A Porter who dyed in the Hospitall I opened and found the Lungs replete with matter the rest of the parts indifferent sound.

23. A waterman who was taken in on the Monday and dyed on the Tuesday. He died asthmaticall, and Hydropicall. His Lungs adhered to the Pleura and were corrupted with a frothy sanies and very rotten, the Liver skirrhous and an indifferent quantity of water conteined in the abdomen, the vesicula fellea very much distended.

24. The Gardener haveing a large Imposthumatione in his backe which being ill managed att first by permitting the matter to lodge proved very painefull and troublesome. I layed him open (by crude incisione) in the dependent part to prevent the matter lodgeing. After that was well digested I found another cavity upwarde which I layed open and still as I opened I found new cavityse all which I layed open and he well in 2 months time.

June the 13th, 1675.

25. A woman opened in the Hospitall from whom was taken a dozen stones oute of the body of the right kidney, there remaineing noe more of the kidney butt a coate in which the stones were involved; the vesicula fellea largely dilated the magnitude of a Quart potte and the Porus Biliarius as big as a small Intestine and Skirrhus. She complained of a vehement paine on the same side and she was very Ictericalle.

June the 13th 1675.

26. James Bowes, Servant to the Warden of the Fleete makeing an arrest att the Palgrave's Head, an inne without Temple Bar, received a Blow on the Right side of his head being a contusione withoute a wounde. They lett him lye allmost a whole day before any thing was done to him att length they sent for my Coz. J. Molins who tooke me along with him. Seeing him speechless and in Coma, my Coz. after the apparatus was prepared immediately layed bare the skull by makeing a Circular Incision upon the part of the Bregma where the Contusione was most. As soone as wee had denudated the Cranion from the Pericranion we found a large fracture with a depressione under us, wee imediately stopped the Hæmorrhage and lett him lye till next day before wee opened him. He was immediately Bled and clystered and the part the cupping glasses were applied to scarified (in the afternoone my Coz. designed to apply the Trefina, butt upon the applicatione of itt, itt would not worke). He imediately apprehended he was upon a depressione, and with his levatory he raised pieces of the skull. There was a large Coagulum upon the Dura Mater, wee dressed him up and he spoke by the next day. Wee had good discharge from the Dura Mater and the patient pretty hearty for 4 or 5 dayse, but att length the Ichor grew fœtid, he flagged in his speech, turned deliriouse, and in 10 days time dyed. After he was dead I layd bare the whole skull and I found him deprest in the middle of the sinciput and a fissured wound about towardes the Occiputt, the Sagittall and Coronall Suture and over the Mendosa. I could compare itt to nothing butt a blow on the belly of a Bottle with wine, Cracked severall wayse. I opened the head and found the Dura Mater mortifyed as far as the fracture went but the remaineing part very well, the Braine sound and firme underneath and not the least discolored.

September, 1675.

27. A lusty, able seaman, having a tumor upon the Internall part of the Cubitt, fixed to all the tendons and vessells; this tumor as he came back from the East Indyes plying Norwards, and being very cold encreased to a large

magnitude. A Chyrurgeone in Holland attempted to bleede in the same Arm upon the tumor, and did bleede him butt the orifice never united and the tumor encreasing kept it open. The tumor when I saw itt first was fixed to the Cubitt. My Coz. proposed this to him; first he told him the danger of the tumor, and then he sayed that he would make ligature upon the upper part of the Arme and lay open by crude incisione the whole body of the tumor, and if then we could see any hopes of recovering his Arme, wee would save itt, if nott, he must be content *in instante* to loose itt. The fellow was very unwilling though then he had his full strength, and sayed he had rather loose his Life than his Arme, as the consequence proved too true. Itt was thus; he shews him to most persons about Towne and one putt in his probe in the orifice where had beene lett bloode and oute gusht a flux of bloode, which then was easily stopped, butt 3 or 4 nights afterwards he had a new flux from the orifice which threw him into a singultus and fainting. One being called to stop itt, did by ligature, but upon the loosening of the Rowler he had another flux which weakened him more and then he was willing to have his Arme taken off, but he was soe weake that my Couz. was unwilling untill he had more strength. Upon the last Rowling his arme tumified very much and att length mortifyed although wee had a cutaneouse separatione, yett the mortificatione runn up into the Axillar Vessels and killed him. Butt there was one thing observeable that when the mortificatione first seised, and he was pretty hearty, his singultus stopped and we had some hopes, butt in 3 or 4 days he relapsed and in conclusione dyed.

28. A Taylor having an Exostosis as big as a wallnutt upon the first Internode of the Index upon the flexor, indolent, butt troublesome in its motione, he was willing to have it off; which was done by making Circular Incisione round the Tumor and pincht off with a paire of pincers made answerable to the forme of the Tumor, which was done, withoute any flux and used his finger better by much than before.

29. Ould Alie her case;—she had a large excrescency, which threwe its selfe oute from the cavity of the Presepeoli

[*Processus Alveolaris?*] of the upper Mandible, and was Callouse. Itt encreased in continuance of time to that magnitude that it threw up her lip and flatted her nose and downwards soe that she could nott gett any thing into her mouth. The tumor was fixed to the gums and the Os Palati, how itt came att first she knew nott. As much of the Tumor as was externall was taken of by a red hott paire of forceps, defending the face with an Iron Vizard, for my Coz. was afraid of an hæmorrhage which would have beene difficult to stop. In the cavity of the gums we kept the excrescency downe with oure repeated actuall cautery. The Tumor when itt was taken off proved cartilaginouse. Itt rising upon her very fast, and the woman being unwilling to be burnt any more wee made ligature aboute the body of the Tumor as much as could be commanded, and in sometime itt came of and her face flatted, and her lips came together, and we had a large cavity above upon us through which came severall peeces of the mandible;—through this loss of substance a continuall defluxione of a hott saline Rheume distilled, which proved very troublesome for the salinall matter being gradually discharged through these parts by their Common Ducts. By such a loss of substance itt continually fell downe causeing a continuall coughing and the woman being above 80 yeares of age, fell into a consumption and att length dyed. If the tumor had remained it would have starved her.

30. A fatt corpulent woman aged about 40 yeares had a very large tumor in her Left Breast. Itt was as big as a pecke, skyrrhus, and upon the dependent part a fungouse. She was very willing to loose her Breast which was accordingly done by Ligature, butt there being too suddaine a regurgitatione of the matter upon the habitt she dyed suddenly. I opened her, butt first I tooke off the Breast above the ligature and found that betweene the ligature and the body all was faire and sound, butt from the ligature outwards began to mortify. In her Body was nothing observeable, butt all parts sound. She was very fatt, and the onely cause of her death as could be adjudged was as is recited before.

31. My Cozen James upon the searching of a little Boy att

the Hospitall in *May,'76,* for the stone, did feele the stone and gave the staff to me to feele and I felt itt, and upon his drawing oute the staff itt came free, untill itt came to the Balanum where itt stopped; and wondring what itt might be I pulled hard and there came oute a small stone in the cavity of the staff which was all the stone the child was troubled withall.

On the *26th of May 1676* was a greate Fire in the Burrough of Southwarke which very much endangered the burning downe of the Hospitall.[1]

June the 6th '76.

32. A fellow aged 25 yeares laboured under a large tumor all over his breast, it first proceeded from a Pleurisy and neglecting Bleeding and revulsione; he fell into a Peripneumonia, the conteined matter (in halfe a yeare's time) protruded itselfe through the Intercostall Muscles and Imposthumated externally, which being opened upon the dependent part we discharged 2 qts. the first day. His stomache held pretty well, he had an Asthmaticall Cough but did not expectorate the same matter which was discharged att the apertione but a viscouse frothy substance; in three dayse time he dyed. After death I opened him and found that the matter mortifyed the Intercostall Muscles and Pleura, the Ribs cariouse, the whole left side was replete with the same fœtid matter, the substance being totally wasted, the Mediastinum contracted and the hart drawn to the right side, the Lungs were like spongy flesh adhered to the Pleura, and the same matter as he expectorated conteined in them. All the lower viscera indifferent well.

33. A woman getting drunk with brandy fell asleepe over a candle, and sett her clothes one fire and before any one came to her assistance she had burnt her face, neck, breast, back, and both her armes very much, the eschars being soe thick that I could scarcely cut through them, at length the eschars separated, there was such a discharge of matter from the Burnes, that it weakened her and killed her.

[1] This notable fire is referred to in the Introduction to the 'Hospital Calendar.'

33*. A young woman takeing cold upon childbearing, fixt the matter upon her Lungs and choaked her, she complained of a difficulty in swallowing, and a soarness in her throate, faint, sickly. After she was dead, I found the right Lobe of the Lungs replete with a matterish serum and an adhæsione to the Pleura, the left side was free, this was that which caused her difficulty in breathing, and the acidity of it the Aphtha. All the uterine parts were free from any distemper.

34. *The Weaver aged 25.* When I saw him first he had a hard indolent tumor in the left testicle without any tumor in the Productione, wee ordered him a bag Truss to keep the part in a better position. This was his case in June 1676: but by the use of oure fomentationes and Plaisters, wee began to have a separatione of serum *in scroto,* and discharged itt to the quantity of a Pint and hoped that the Tumor would spend in an Hydrocele; the swelling was rather less than bigger and somewhat softer. Butt the late dreadfull fire in Southwarke happening, much endangering the Hospitall, those patients that were capable of working did worke, amongst whome this was one, for he could goe very well, and was nott sicke, nor any other way indisposed. Within a week after the fire, he haveing overstrained himselfe, a new defluxione of humors came downe, and in despite of all attempte made to the contrary the testicle encreased twice as big as before to a tumor in the Productione very hard. This tumour encreased so much that you might feele itt hard in the Belly as high as the regione of the Kidneys. Thus he lay above a quarter of an yeare, his Stomack very well, yett he consumed in body, and the tumor encreasing as well in the Abdomen, as in Scroto till att length it encreased so much in the cod, and the vessels soe largely distended, that he had severall eruptiones of blood. There was a Seton left in the depending part of the Scrotum, through which good large quantityse of water discharged sometimes blood. At length dyed, languished above a quarter of an yeare. *Post mortem,* I opened him; my first care was to lay the Tumor in situ as much as I could, butt upon the opening of the Abdomen, I found a very large Bladder of water in the Pelvis which att first I thought was the Vesica Urinaria but upon more seriouse inquisitione, I found itt to be a separatione of Lympha, that was lodged

above, and had an Appendix to the other tumor that adhered to the Preparing vessels, and likewise discharged its selfe in scroto (which gave us the seperatione I spoke of before. The Hydatidis was as big as an ox bladder (blowne up) full of clere Lymphid matter. I could find no more butt this. The Body of the Testicle was as big as the belly of a Bottle and distended which a crass Lymphid matter, which makes the tumor what wee called a sarcocele. The Preparing Vessels, labored under the repletione of the same tumor, and likewise the whole body of the Mesentery run into a glandulouse substance firmely adhering to the Lumball regione so fast, that I was forced to separate itt with my knife. The Preparing Vessels, and the Ureter, was drowned in the Body of this large unequall, præternaturall tumor, the Mesentery being one Glandulouse body. The Kidneyse were very good and firme, the Intestines small and shrunk up, the Bladder good, the Liver very well in its parenchyma. His lungs and heart very well, there was a præternaturall quantity of water in the ventricles of the Braine. J. M.

35. A woman aged 40 came into the Hospitall with a difficulty of breathing and her face and legs Hydropically tumifyed, being as supposed an Anasarcka; and very weake and ill. After some time she dyed. I opened her, and found the lower Belly with a naturall quantity of water, the viscera very well, onely the Hepar Skyrrouse. In the Thorax there was a large quantity of water, and likewise in the Pericardium, the Lungs were very flabby, though nott much discolored. In the Left Ventricle of the Hart I found the same Crass Lymphoid substance, adhering to the Collumella, and protruded its selfe into the Magna Arteria.

36. The woman aged 16, in St. Tho. Hosp. laboured under a difficulty of breathing, a very greate paine att her heart. After death I opened her in *December 1676, Die 26.* Her breast was narrow. After I had taken up the Sternon, I found a totall adhæsion of the Lungs to the Pleura, nott much discolored, nor noe matter lodged in them (she never complained of a cough). Her Hart large, a præternaturall quantity of water in the Pericardium. Wee weighed her hart which weighed oz. 12; the Liver somewhat skyrrhus, the vesica fellea large with a Cœrulean Choler. Her blad-

der largely distended with water. Her Matrix very small, tending to the left side. I tooke all the appertaineing with the Vulva, and shewed them. The Hymen was plainely permeable, as allso the Carunculæ Myrtiformes. The rest of the viscera very well. I opened her heart, and found a Polypus, which adhered to the Columella in the right Ventricle, into the Vena Arteriosa.

December 1676.

37. A lad about 17 years of age laboured under a Rheumatisme which terminated in his thigh and legg, in an Abscess, upon the discharge of which, there was so large a discharge of matter that his body consumed and the parts mortifyed, and in a fortnight dyed. A woman laboring under a feaver in the same case.

38. One aged aboute 30, received a Contusione on the neck; it imposthumated largely and att length broke of its selfe. He came into the Hospitall much emaciated, loss of stomack, and a large discharge of a salivall matter from the salivary Ducts, the acrimony of the matter, upon a fermentation of his blood, corroded and mortifyed both externally and internally soe that he could swallow nothing, and att length Death.

39. A country man of a strong saline constitutione, came into the Hospitall with a compound fracture (a Cart loaded went over the small of his Legg) both the fossills shivered and broke. I putt him in a good positione, wee had Imposthumationes, and exfoliatione of the Bones, yett in sixteene weekes time I cured him, that leg being somewhat shorter than the other.

December 1676.

40. One being of a strong constitutione received (by accident) a puncture on the flexor Pollicis, the paine was soe violent that itt brought downe a greate defluxione of humors and att length the violency of paine terminated in an Imposthumatione, the which I laid open in the depending part, upon which discharge he was immediately relieved, and in 3 weeke or a month's time, his paine was all off, and the Incisiones cicatrized, there remaineing a contraction of the

tendons and a hardness upon the member which by emollient supleing Medicines, in some continuance of time were brought to there former use.

41. One aged about 25 by a defluxione of humors upon the head of the Os femoris it was protruded; this continued so for many years, att length the reducing of it was attempted by a bone-setter, who upon extensione brought downe a new Defluxione, this an Imposthumatione, and att length a Mortificatione, that the vessells were corroded, that he bled att the perforatione 2 or 3 qts. of an Ichorouse bloody matter in a day, for 3 or 4 Dayse and Dyed. After he was Dead I opened the Member. A Mortificatione had seized all the Member, the head of the Os femoris, and the Rotators were partly consumed and was thrust up above the spine of the Ischion, the Acetabulum was caries, the Ligamentum latum, and breve was utterly oblitterated, and the mortificatione was inserted into the ramificatione of the Iliack vessells and full of the same matter that was discharged when he was living. This person had bin better to have continued lame, than to be brought to an untimely end by a bold ignorant Undertaker.

42. A lad aged 15 Laboured under a Rheumatisme, which terminated in an Imposthumatione in his Knee. This was discharged when itt came to maturity by a Brother Surgeon butt the boy's friends proveing poore they gott him into Hospitall. I Dilated the Imposthumatione yett the Boy laboured under an Intermitting feaver; there was a plentifull discharge of matter, yett att length the Boy fell into the Small Pox and Dyed deliriouse. Although we kept the depending orifices open, yett his Intermitting threw downe more matter constantly upon us.

February the 12th 1676-7

43. One Aged aboute 50, laboured under great difficulty of Breathing, a constant Cough, large expectoratione, he could nott ly on his right side. Dyed. I opened him, his lower was all perfect, onely the Liver, which was schirrhus. Upon takeing up the Sternon the side of the thorax was full of water, the Lobes of the Lungs looked of a Pale colour, the Lungs were very flabby, and noe adhæsione.

On the left side there was an Adhæsion of the Lungs to the Pleura, Glandulouse and full of a Viscouse frothy matter. In the Hart we found in the left Ventricle a Polypus intruded into the Aorta, and adhering to the Columella. He had a greate Color and fresh in his face which was from oppressione below and stagnation above.

44. A Person *In March 1676-7:* laboured under a very Ill habit of Body, haveing formerly had a fistula Lachrimalis, upon the stopping up of which the matter fell upon the ethmoid, and fouled the bone. Mr. Peirce to prevent a further Inconveniencey putt him into a salivatione, butt upon stirring of the matter, itt run all Downeward, and terminated in a Dysentery and he Dyed. After death I opened him; first I divided the Cranium, the Braine was very turgid, and replete with water, and likewise a goode quantity of water in the severall ventricles, the Salivary Ducts were nott much distended (because nothing ascended up to them) the Lungs one the right side were Indifferent well, but on the left he was Asthmaticall, and an Adhæsione to the Pleura. The Pericardium largely Distended and adhered to the Pleura (which is more than ever I see before) and a greate quantity of water conteined in itt. The Hart was Lax and flabby, little or noe blood being in either ventricle. The Coronary Vessells were largely distended, and the Viscosity I have soe often found conteined in the left Auricle. The Liver Skirrhus, the vesicula biliaris very largely distended, and had tinged the adjacent parts with its color, the Mesentery replete with glandules, the Spleen indurated, etc. I am really of the opinion, that from the large quantity of choler, upon stirring up the matter by salivation, was that which threwe him into the Dysentery which carried him of; for Choler is Catharticall.

March 1677.

45. One labouring under an *Ulcus Tibiæ*, Highly Scorbitticall. A large Schirrhus tumor upon the spleene, Ictericall, and as many complicated distempers as could possibly be contained in one person. When we attempted to heal up the ulcer, then he fell into a Dysentery, and when his sore run he was weakened. Att this rate he continued a yeare

and more, att length Dyed. I opened him, and found all the Viscera contaminated, but more especially the Mesentery Glandulouse, the Liver somewhatt large, the Vesicula fellea very largely distended, but the Spleene bigger than the Liver, weighed 6 lb. indurated and a fæculent Melancholy contained in itt.

46. I opened a Scotch man that dyed in the Hospitall. Hydropicall; when I had opened the Abdomen, all the Viscera were mortifyed and discoloured.

47. A Seaman came into the Hospitall, with a large wound upon the Bregma, withoute any Symptomes. The wound was digested, Incarnated, and healed, after some times he fell into vomitings, Convulsiones and paralisis. He complained of noe greate paine in his head, and att length grew deliriouse and soe dyed. I opened his head and in the right ventricle of the Braine found a large Quantity of water, which I suppose was the Cause of relaxing all the Nerves. I found noe blood extravasated nor fracture nor fissure upon the cranium.

49. A woman Aged 50, laboured under a spitting of Blood, which for some continuance of time left her. Att length she relapsed into a violent vomitione which carried her of in twelve houres time. After she was dead, I opened her, and in her stomach was a pottle of crude and grumouse Blood. I imagine the eruptione was made from the Vasa brevia into the stomach. The Lungs and Hart good, the Liver, Spleene, Pancreas very much indurated, the Mesentery very thick and glandulouse.

Of the Fistula in the Fundament and the Cure thereof.

The patient came up to London for help upon the third day of Feb. and made choice of my Master, and with God's help of the sixth of the said month in the morning about six or seven of the clock, he repaired to his Chamber, the patient being up, and sat by a good fire. He first gave him

a draught of small Beere. When all the things was ready the operatione was done presently. First my Mr. desired the patient to loose his Breeches and bowe himselfe upon his bed holding his thighs asunder, then my Mr. did oyle his middle finger thrusting it up at the fundament till he came to the upper part of the fistula. Then with the other hand he tooke a needle made of Lead threaded with foure or five fold of stitching silk made into a Ligatour well waxed. Then my Mr. took the needle and [passed it into the fistula,] setting it upon the end of his finger which is within the fundament, and conveying it out at the fundament. Then he did knitt the ligatour as straite as he could pull it, of a double whizle knot, cutting both the ends away, and then drest him twice a day with Basilicon until the ligatoure did drop from him which was nine dayes. Then did he dress him with Egiptiacum[1] mixt with Basilicon to heall him and dry him up. But in the meantime as he was proceeding on, and had brought the cure in a forward way, a new business befell him, piles came downe and did lie upon the sore that it could not heall. For that he let him blood in the arme and applyed Leaches to them and applyed drying powders with a chafing dish and a little fire, throwing powder upon the fire and he sitting over it to dry up the piles, so that it continued a month longer in care than it would have done if them piles had not happened, and upon the 24th of March he returned back to his home a perfect sound man.

Note.

It is worth notice that this operation is done almost exactly according to the directions of John Arderne, the old

[1] *Unguentum Ægyptiacum* (of the 'London Pharmacopœia,' 1662) was thus made:—℞ Æruginis minutissime tritæ partes v; Mellis partes xiv; Aceti acerrimi partes vij. Coquantur omnia simul in justam spissitudinem, et in colorem subrubeum. (The cupric salt being reduced by the honey, it would have contained suboxide of copper, and thus be of a reddish colour.) The name of Basilicon ointment has lasted to our day. In the Pharmacopœia of 1662 there were two Basilicons, the greater and the less (or cheaper). The latter was thus composed:—℞ Ceræ flavæ, Resinæ pinguis, Picis Græcæ, ana lib. dimid. Olei uncias novem. Liquata commisceantur, et fiat s. a. unguentum. It was thus almost the same as our modern resin ointment. The greater Basilicon contained in addition Turpentine, Olibanum, and Myrrh.

English surgeon, who wrote a 'Treatise on the Fistula' about 1370; and that a "translation of John Arderne" is one of the subjects mentioned in James Molins's note-book, though the text does not appear.

This is Arderne's account of the operation, as afterwards printed in English in 1588.

"Take the instrument called *Acus rostratum* and put that ende which hath the eye into the hole of the Fistula next the fundament, your finger of the left hand being in the fundament, and when you feele the needle against your finger, labour diligently to bring out the end of it at the fundament by bending it gently. Which done, put into the eye of the needle a strong silk thrid, four or six fold, which we call *Frenum Cæsaris*, and draw it through the fundament into the hole of the Fistula with another spare single thrid, that if the *Frenum Cæsaris* happen to be cut, or breake, then with the same spare thrid ye may draw in another with great ease. Which being done, you may choose whether you will cut it or fret it out."

The *Acus rostrata* is described as "a snowted needle, for it hath the one end like a snout, and in the other end an eye like a needle, by which the thrids ought to be drawne through againe by the middle of the Fistula. And it ought to be of Silver, and it should containe in length eight inches."

Arderne says further:

"If it happen that the Fistula be deepe, and that there be distance betweene the hole of the Fistula and the fundament, or if the patient be fearefull to abide cutting, or for some notable cause being there, then mayest thou with a thrid drawen through the middest of the hole of the Fistula, and the fundament, cut the flesh. And it availeth as well as by cutting with a knife, but that it asketh longer time. For though ye binde it right straightly in the beginning, yet it will be a moneth or three weekes at the least, or the fretting be complete."

Thus it appears that the surgery of fistula had not changed much in 300 years, except in the time required to complete the operation.

THE CONDITION

AS TO

VACCINATION OF PERSONS SCARRED BY SMALLPOX.

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Since November, 1884, I have observed, whenever possible, the scars of vaccination, if such existed, on every person who had become pitted with the smallpox which came before me at St. Thomas's Hospital and at the vaccination stations with which I am connected. These persons have been almost all women; indeed, out of 456 cases in which inspection was permitted, only 19 were among males. Every case examined is given in Table I. In 1888 I had collected 152 cases, which were published in the 'Transactions of the Epidemiological Society' for 1887–8.

In what follows hereafter, Cases 24, 37, 65, 96, 131, 246, 274, and 362 are eliminated from consideration for the following reasons:—Cases 24, 37, and 362, because the vaccination took place during the incubatory period of smallpox; Cases 65, 131, and 274, because, although they had some indistinct mottling, it was impossible to conclude with any certainty that this was the result of vaccination; Case 96, because from the history it seemed certain that she had not had her attack of smallpox until eleven years old, although she stated that she had had two attacks, one at two years of age, the other at eleven years of age; and lastly, Case 246 because I was not permitted to examine the arm. There are, therefore, $456 - 8 = 448$ cases to be dealt with. Out of these 448 cases there are 210 who were admittedly unvaccinated before their attack of smallpox, or 46·87 per cent.; and these admittedly unvaccinated people

had their smallpox at the average age of 6·58 years, as will be seen at the end of Table II. This age is indeed high when compared with the average age individuals were attacked with the disease in the last century; however, there are three circumstances to be borne in mind :—Firstly, the greatly diminished prevalence of smallpox in the present day to that which obtained in the last century. It follows, therefore, that the opportunity to become affected is corespondingly not so great, and this would delay the average age at which unvaccinated individuals contract the disease. Secondly, a large proportion of the unvaccinated individuals die of the disease, and these would in the main be the infants; hence we have a considerable portion of the youngest eliminated by death. And thirdly, only those who have been obviously pitted with smallpox are dealt with in this paper. There are some individuals who, although they have had the disease, yet are not obviously pitted. If these could be added, no doubt the average age would be diminished at which smallpox attacks the unvaccinated. There are, besides the admittedly unvaccinated, as many as 105 individuals who, although they say they have been vaccinated, yet have no scar of vaccination, or 23·44. As a matter of fact there are as many as 70·31 per cent. among those who are pitted with the smallpox who bear no evidence of vaccination. An opinion can be formed of how many of the latter class may be reckoned among the unvaccinated thus :—At Lamb's Conduit Street Vaccination Station, since it was opened in 1882 until March in the present year, 1774 women have been revaccinated; of these 82 had no scar of their primary vaccination, and 22 out of the 82 went through their presumed revaccination exactly like a primary vaccination, or 26·83 per cent. On the other hand, out of 1692 women who bore scars of vaccination, it was found that 47 of them went through their revaccination like a primary vaccination in all respects, or 2·78 per cent. If now this latter percentage be deducted from the 26·83 per cent. we obtain 24·05 per cent. as the number who really had never been vaccinated.

From these data we can calculate that of the 105 cases which have no scar of vaccination, 25·25 should be added to 210 admittedly unvaccinated; this will give then 235·25

as really the number of unvaccinated among the 448 cases, or 52·51 per cent.

Now the proportion of the unvaccinated to the vaccinated in London is not more than 5 per cent., yet we have seen that people pitted with smallpox are to the extent of 52·51 per cent. unvaccinated; and if, as some contend, there is no protective power in vaccination against the smallpox, what is the meaning of this? I leave this question to be answered by those who hold the above view; for myself, I am content to believe there is protection afforded by vaccination against smallpox, and adduce this as one out of many proofs that such is the case.

At the end of Table II, p. 65, it will be seen that the average age of 105 individuals who affirm they have been vaccinated, but have nevertheless no scar of vaccination, is 9·07 years when they are attacked by smallpox, and it has just been seen there is good reason for believing that 25·25 of them have never really been successfully vaccinated; and as the average age at which the admittedly unvaccinated have their smallpox is 6·58, therefore $6{\cdot}58 \times 25{\cdot}25 = 166{\cdot}14$, which is the aggregate age at which we may reasonably suppose they had their smallpox. This deducted from 952·64 years, the aggregate age at which people who affirm they have been vaccinated but have no scar, equals 786·5, and this divided by $105 - 25{\cdot}25 = 79{\cdot}75$, *i. e.* $\frac{786{\cdot}5}{79{\cdot}75} = 9{\cdot}86$. Hence this is the average at which those who may be supposed to have been really vaccinated, but who bear no scar of vaccination, have their smallpox.

From Table II it will also be seen that those who bear one scar of vaccination have their smallpox at the average age of 17·77, the earliest age being 2. That those who have two scars of vaccination have their smallpox at the average age of 17·82, the earliest age being 7. That those having three vaccination scars have their smallpox at the average age of 18·02, the earliest age being 9. That those having four vaccination scars have their smallpox at the average age of 18·67, the earliest age being 12; and those having five or more scars have their smallpox at the average age of 19·3, the earliest age being 13.

It will be noticed not only does the average age at the time of having smallpox increase directly as the number of the scars, but also the earliest age at which people become liable to contract smallpox after vaccination also increases in the same way, so that we may conclude that vaccination done in five places gives a longer time of immunity from smallpox than when it is only done in one. It has been stated that Cases 24, 37, 362, were eliminated from consideration, because vaccination was performed during the incubatory period of smallpox. Perhaps the reason why may not be obvious to all, and it will not be thought superfluous if it is more fully stated.

The history of Cases 24 and 37 cannot now be given, but that of 362 will serve as an illustration. The girl, who was twenty-three years of age, had her face scarred in the manner faces are scarred when a person has never been vaccinated ; and, moreover, the severity of the attack was further evinced by her having lost an eye through the disease, which she had, as she stated, when she was only fourteen months old, after vaccination. Upon questioning her as to her vaccination, she alleged she was vaccinated before she had smallpox, and on examining her arms six large foveated and well-marked scars of vaccination existed, three on each arm, and arranged in the same pattern as my predecessor Mr. Marson was in the habit of placing his insertions of lymph. From the appearance of the scars I could not doubt but they were done before her attack of smallpox. So much, then, was all that could be gathered from the patient herself ; but I ascertained her mother's address, and upon calling, her mother told me that her husband was seized with the smallpox one Wednesday, and she took her children, who had not been vaccinated, to Surrey Chapel on the following Tuesday, and that the child in question was taken ill with smallpox on the following Saturday. This girl was therefore vaccinated on the seventh day of the incubatory period of smallpox. In connection with this the following cases may be mentioned. Three children were vaccinated at Surrey Chapel, or, I should say, at Victoria Hall, on the 26th May, 1881. This turned out to be on the ninth day of the incubatory period of smallpox in two, and the seventh day of the incubatory period in one. All the children had smallpox

in its unmodified form, yet all the vaccination places had taken perfectly, and were well formed.

The child aged eight, who was vaccinated on the seventh day of the incubatory period of smallpox, died of the disease, but the two children aged thirteen and twelve lived. The one aged thirteen, who was a girl, I saw on the 15th June, 1895. She was considerably scarred by smallpox, and the scars of vaccination were five in number, but very faint and indistinct. The other, a boy aged twelve, was seen on the 10th July, 1895. He was only slightly scarred by smallpox, and the vaccination scars, five in number, were very similar to his sister's just described.

The history of Case 96, which is also one of the excluded ones, is the following :—Mrs. L. S. A—, æt. 22, states that she has had smallpox twice, the first attack at the age of two, the second at the age of eleven years. She said she had been successfully vaccinated in infancy, and, indeed, bore three well-marked and characteristic scars of vaccination. She also said that seven others, her brothers and sisters, all had the disease at the same time, although they had all been vaccinated ; that they all recovered, and that not one of them is pitted, and that she herself was not pitted from this attack of smallpox. She states her second attack was at the age of eleven years. That she was sent to the Hospital Ship "Atlas," and afterwards to Deptford. That from this attack she was pitted, and had since suffered from disease of the hip-joint in consequence of the attack. If this history were true, we should have to believe that she had an attack of smallpox within two years of a successful vaccination done in three places. That this attack of smallpox did not take place during an epidemic year, but in one in which London was remarkably free from the disease, viz. in 1875. That not only she, but seven of her brothers and sisters, all of whom had been vaccinated likewise, had the complaint ; nevertheless all recovered, and not one of them was pitted. That she again suffered from the disease within nine years of her alleged first attack. The whole history is so full of glaring improbabilities that we cannot but feel justified in excluding it from Table II.

Table I.

No. in series.	No. in Case-book.	Age when attacked.	Whether vaccinated with effect before having smallpox.	If vaccinated, number and area of scars, the average diameter of scar represented by a line.	Age of patient at time of observation.	Date of observation.	Year patient had smallpox.	Remarks.	
		Days.							
1	206	3	N.V.	.....	20	Feb. 23, 1889	1869	Sparsely scarred, but area of scar large	3 *b*
2	306	3	N.V.	.....	40	April 15, 1890	1850	Scarred with large ill-defined marks	3 *b*
3	407	7	N.V.	.....	26	June 15, 1893	1867	Area of pocks large, but not numerous	3 *b*
4	331	14	N.V.	.....	19	Oct. 14, 1890	1870	Not much marked	1
5	164	21	N.V.	.....	38	June, 1888	1850	Badly marked	5
6	254	21	Inf.	0	26	Sept. 24, 1889	1863	A scar or two on face	3 *b*
7	283	28	N.V.	.....	23	Jan., 1890	1866	Pits deep, but not large; sparsely distributed	3 *a*
8	83	35	N.V.	.....	24	July 13, 1887	1863	Not deeply pitted	
9	32	42	N.V.	.....	56	June 27, 1887	1831	Somewhat pitted	
10	49	42	N.V.	.....	21	Mar. 25, 1887	1886	Said to be vaccinated; severely pitted, and eye damaged	
11	165	42	N.V.	.....	41	July 18, 1888	1847	Scarred on face	
12	200	42	N.V.	.....	33	Feb. 6, 1889	1856	Much scarred; confined chiefly to the region about nose	
13	358	42	N.V.	.....	34	Nov., 1891	1857	Sparsely, but pits over a large area	3 *b*
14	256	49	N.V.	.....	30	Sept. 24, 1889	1869	Sparsely, but area of scars large	3 *b*
15	16	61	N.V.	.....	32	June 29, 1885	1853	Eye with serious corneal damage; face scarred	
16	236	61	Inf. without effect	0	22	July 9, 1889	1867	Deeply and acutely pitted; not numerous	
17	299	63	N.V.	.....	24	Mar. 4, 1890	1866	Scarred	3 *b*
18	335	90	Inf.	0	28	Oct. 29, 1890	1862	Moderately pitted	3
19	346	90	N.V.	.....	32	Mar. 19, 1891	1859	Much scarred	4
20	227	91	N.V.	.....	23	May 9, 1889	1866	Thickly and sharply, though small pocks	3 *a*
21	328	91	Inf.	0	25	July, 1890	1865	Slightly scarred	2

22	270	92	?	0	23	Oct.	17, 1889	1866	Slightly scarred	2
23	39	106	N.V.	.....	28	Feb.	15, 1887	1859	Much scarred on face	
*24	122	106	Inf.	3 / fov.	23	Oct.	20, 1887	1864	Slightly scarred	2
25	201	92	?	0	54	Feb.	7, 1889	1835	Slightly marked	2
26	451	122	N.V.	.....	37	Nov.	27, 1894	1857	Considerably pitted	
27	454	122	N.V.	.....	30	Jan.	3, 1895	1866	Large area; not very confluent	3*b*
28	285	152	Inf.	0	27	Feb.	4, 1890	1863	Large area, but sparse	3*b*
29	92	182	N.V.	.....	52	Aug.	4, 1887	1835	Slightly marked	
30	129	182	N.V.	.....	36	Nov.	1, 1887	1851	Much pitted	
31	148	182	N.V.	.....	32	May	1, 1888	1859	Not much scarred	
32	232	183	N.V.	.....	25	June	18, 1889	1865	Slightly scarred	2
33	394	183	N.V.	.....	30	Feb.	23, 1893	1860	Irregularly scarred on face, especially about nose	3
34	448	183	N.V.	.....	54	Oct.	30, 1894	1840	Sparsely scarred; large area	3*b*
35	12	213	N.V.	.....	28	April	12, 1885	1858	Face pitted	
36	77	213	N.V.	.....	30	July	3, 1887	1857	Pits deep, but not numerous	3*b*
*37	457	244	8 months.	6 / good fov.	23	Jan.	16, 1895	1871	Large area; not very confluent; lost eye	
38	62	274	N.V.	.....	35	June	2, 1887	1852	Face scarred	
39	117	274	N.V.	.....	32	Sept.	21, 1887	1856	Pitted	
40	242	275	N.V.	.....	41	July	27, 1889	1848	Scarred on face	
41	48	304	N.V.	.....	39	Mar.	23, 1887	1849	Much pitted	
42	154	304	N.V.	.....	25	May	31, 1888	1862	Sparsely, though deeply scarred	3*b*
43	459	304	N.V.	.....	62	Feb.	12, 1895	1834	Large area; not very confluent	3*b*
44	72	335	N.V.	.....	49	June	23, 1887	1839	Perceptibly scarred	
45	208	335	N.V.	.....	56	Mar.	7, 1889	1834	Scarred	3
		Years.								
46	42	1	N.V.	.....	28	Feb.	18, 1887	1860	Much scarred on face	
47	96	1	?	0	62	Aug.	11, 1887	1826	Deeply scarred	
48	104	1	N.V.	.....	24	Aug.	23, 1887	1864	Face scarred	
49	106	1	Inf.	0	46	Aug.	24, 1887	1842	Face scarred	
50	128	1	N.V.	.....	28	Nov.	16, 1887	1860	Distinctly marked	
51	149	1	Inf.	0	24	May	8, 1888	1865	Deeply scarred	
52	181	1	N.V.	.....	36	Nov.	6, 1888	1853	Considerably scarred	3
53	187	1	N.V.	.....	24	Nov.	20, 1888	1865	Scarred	3
54	230	1	Inf.	0	40	May	16, 1889	1850	Scarred	3

No. in series.	No. in Case-book.	Age when attacked.	Whether vaccinated with effect before having smallpox.	If vaccinated, number and area of scars, the average diameter of scar represented by a line.	Age of patient at time of observation.	Date of observation.	Year patient had smallpox.	Remarks.	
55	265	1	Inf.	0	39	Oct. 8, 1889	1851	Slightly marked	2
56	272	1	N.V.	.....	51	Oct. 24, 1889	1839	Slightly scarred	4*a*
57	275	1	Inf.	0	29	Nov. 12, 1889	1861	Sparsely, and scarred over small area	3*a*
58	290	1	Inf.	0	26	Feb. 11, 1890	1865	Sparsely, and scarred over small area	3*a*
59	312	1	Inf.	0	24	May 1, 1890	1867	Slightly pitted	2
60	342	1	N.V.	.....	34	Nov. 25, 1890	1857	Large area and sparsely scarred	3*b*
61	351	1	N.V.	.....	28	July 25, 1891	1864	Pitted	3
62	401	1	N.V.	.....	34	April 20, 1893	1860	Heavily pitted	4
63	452	1·16	N.V.	.....	25	Dec. 19, 1894	1894	Large area of scar, chiefly about nose	3*b*
64	120	1·33	N.V.	.....	58	Oct. 6, 1887	1831	Severely pitted	
*65	64	1·5	Inf.	?	22	June 9, 1887	1867	Not recorded	
66	65	1·5	N.V.	.....	29	June 9, 1887	1860	Much scarred	
67	91	1·5	N.V.	.....	38	Aug. 2, 1887	1851	Scarred on face	
68	133	1·5	Inf.	0	36	Dec. 14, 1887	1853	Slightly pitted	
69	429	1·5	Inf.	0	46	Mar. 6, 1894	1847	Considerably scarred	3
70	271	1·83	N.V.	.....	39	Oct. 17, 1889	1852	Scarred	3
71	6	2	Inf.	0	27	Mar. 11, 1887	1859	Face pitted	
72	10	2	N.V.	.....	39	April, 1885	1848	Scarred on face	
73	36	2	N.V.	.....	25	Feb. 9, 1887	1864	Severely pitted	
74	107	2	N.V.	.....	40	Aug. 27, 1887	1849	Much pitted	
75	115	2	N.V.	.....	62	Sept. 13, 1887	1826	Badly pitted	
76	116	2	N.V.	.....	21	Sept. 21, 1887	1868	Badly pitted	
77	124	2	N.V.	.....	49	Nov. 1, 1887	1840	Scarred	
78	143	2	N.V.	.....	65	Feb. 21, 1888	1825	Much marked	
79	158	2	Inf.	0	25	June 26, 1888	1865	Much pitted	4
80	170	2	N.V.	.....	36	Aug. 4, 1888	1854	Large scars, not numerous	3*b*
81	199	2	N.V.	.....	27	Feb. 5, 1889	1864	Considerably pitted	3
82	247	2	N.V.	.....	24	Aug. 13, 1889	1867	Very slightly scarred	1
83	262	2	Inf.	0	42	Oct. 3, 1889	1849	Slightly scarred	2
84	266	2	Inf.	0	23	Oct. 8, 1889	1868	Slightly scarred	2
85	269	2	N.V.	.....	50	Oct. 10, 1889	1841	Scarred	3

86	311	2	Inf.	1 fov.	27	Apr.	24, 1890	1865	Lost one eye; slightly pitted	3*b*
87	314	2	N.V.	.....	40	May	1, 1890	1852	Tolerably numerous; largish area	3*b*
88	316	2	N.V.	.....	22	May	13, 1890	1870	Large area; tolerably numerous	3*b*
89	327	2	Inf.	0	29	July,	1890	1863	Pitted on face	2
90	376	2	N.V.	.....	55	May	31, 1892	1839	Scarred on face severely	4
91	389	2	Inf.	0	48	Jan.	10, 1893	1847	Sparsely but obviously marked	3*b*
92	393	2	N.V.	.....	24	Feb.	16, 1893	1871	Scantily pitted on face; small area, but deep	3*a*
93	399	2	N.V.	.....	17	Mar.	30, 1893	1878	Sparsely pitted, but area large	3*b*
94	423	2	N.V.	.....	36	Nov.	9, 1893	1859	Pitted on face	3
95	425	2	N.V.	.....	32	Jan.	2, 1894	1864	Pitted on face	3*b*
*96	458	2	Inf.	3	22	Feb.	5, 1895	1884	Considerably pitted; area large	3
97	63	2·5	N.V.	.....	41	June	8, 1887	1848	Slightly pitted	
98	186	2·5	N.V.	.....	52	Nov.	20, 1888	1839	Scarred	3
99	193	2·5	?	0	26	Jan.	15, 1888	1866	...	3*b*
100	226	2·5	?	0	25	May	9, 1889	1867	...	
101	444	2·5	N.V.	.....	28	Aug.	23, 1894	1869	...	3*b*
102	191	2·83	N.V.	.....	24	Dec.	18, 1888	1867	Scarred; large area	3*b*
103	45	3	N.V.	.....	23	Mar.	10, 1887	1867	Markedly pitted	
104	69	3	N.V.	.....	24	June	14, 1887	1866	Slightly scarred	
105	71	3	N.V.	.....	22	June	23, 1887	1868	Deeply pitted	
106	86	3	N.V.	.....	42	July	1, 1887	1848	Face pitted, but not badly	
107	90	3	N.V.	.....	24	Aug.	2, 1887	1886	Deeply but sparsely pitted	
108	95	3	N.V.	.....	53	Aug.	10, 1887	1837	Markedly pitted	
109	108	3	N.V.	.....	25	Aug.	27, 1887	1865	Much pitted	
110	109	3	N.V.	.....	26	Aug.	27, 1887	1865	Pitted, not severely	
111	151	3	N.V.	.....	49	May	10, 1888	1842	Much scarred	
112	176	3	N.V.	.....	38	Oct.	25, 1888	1853	Pitted	4
113	215	3	N.V.	.....	39	March	26, 1889	1853	Scarred with large scars on face	4
114	218	3	Inf.	0	31	April	3, 1889	1861	Slightly marked	
115	245	3	N.V.	.....	23	Aug.	8, 1889	1869	Sparsely, but area of scar large	3*b*
116	250	3	Inf.	0	22	Aug.	21, 1889	1870	Very slightly scarred	1
117	252	3	Inf.	0	19	Aug.	21, 1889	1873	Sparsely, but area of scars large	3*b*
118	324	3	N.V.	.....	29	June	26, 1890	1864	Considerably pitted, especially about nose	3
119	332	3	Inf.	2 very indistinct	26	Oct.	15, 1890	1867	Considerably scarred	3
120	333	3	Inf.	0	24	Oct.	15, 1890	1869	Moderately pitted	3

No. in series.	No. in Case-book.	Age when attacked.	Whether vaccinated with effect before having smallpox.	If vaccinated, number and area of scars, the average diameter of scar represented by a line.	Age of patient at time of observation.	Date of observation.	Year patient had smallpox.	Remarks.	
121	339	3	Inf.	0	36	Nov. 18, 1890	1857	Sparsely, though deeply scarred	3*b*
122	345	3	N.V.	.....	26	May 7, 1891	1867	Considerably scarred	3
123	374	3	Inf.	4 / fovs.	26	May 10, 1892	1869	Slightly pitted	2
124	378	3	3 years old	0	28	July 19, 1892	1867	Area of scars small, but fairly numerous	
125	385	3	N.V.	.....	24	Oct. 25, 1892	1870	Severely scarred	5
126	392	3	N.V.	.....	28	Jan. 26, 1893	1868	Scarred on face	3
127	405	3	N.V.	.....	25	June 8, 1893	1871	Severely scarred	5
128	430	3	N.V.	.....	26	Mar. 20, 1894	1871	Severely pitted	5
129	455	3	N.V.	.....	31	Jan. 7, 1895	1867	Large area, sparsely	3*b*
130	46	3·5	N.V.	.....	35	Mar. 22, 1887	1856	Markedly pitted	
*131	8	4	Inf.	4 indistinct and plain scars	22	Mar. 17, 1885	1866	Face not badly, but distinctly marked	
132	27	4	Inf.	0	24	Dec. 27, 1886	1866	Pitted distinctly	
133	53	4	N.V.	.....	35	May 3, 1887	1856	Slightly pitted	
134	67	4	N.V.	.....	50	June 2, 1887	1841	Much pitted	
135	125	4	N.V.	.....	24	Nov. 2, 1887	1867	Slightly scarred	
136	127	4	N.V.	.....	30	Nov. 10, 1887	1861	Face scarred	
137	141	4	N.V.	.....	45	Jan. 25, 1888	1847	Marked on face	
138	142	4	N.V.	.....	56	Feb., 1888	1836	Much marked	
139	147	4	Inf.	0	25	April 26, 1888	1867	Sharply scarred	
140	179	4	Inf.	0	24	Nov. 6, 1888	1880	Markedly scarred	3*a*
141	180	4	N.V.	.....	26	Nov. 6, 1888	1846	Severely	5
142	184	4	N.V.	.....	54	Nov. 15, 1888	1838	Scarred	3
143	203	4	Inf.	0	28	Feb. 13, 1889	1865	Considerably scarred	3
144	249	4	Inf.	0	29	Aug. 15, 1889	1864	Largely, but sparsely scarred	3*b*
145	280	4	N.V.	.....	32	Jan. 14, 1890	1861	Pitted	3
146	289	4	N.V.	.....	26	Feb. 6, 1890	1868	Scars large, but sparsely scattered	3*b*
147	354	4	Inf.	0	32	July 27, 1891	1863	Scarred	3
148	383	4·5	N.V.	.....	21	Oct. 13, 1892	1873	?	
149	54	5	N.V.	.....	29	May 3, 1887	1853	Pitted, but not deeply	

150	105	5	N.V.	.....	28	Aug. 23, 1887	1864	Scarred	
151	126	5	N.V.	.....	67	Nov. 3, 1887	1825	Slightly scarred	
152	134	5	N.V.	.....	34	Dec. 14, 1887	1860	Slightly scarred	
153	153	5	N.V.	.....	32	May 29, 1888	1861	Slightly scarred	
154	159	5	Inf.	0	31	July 4, 1888	1862	Much pitted	4
155	167	5	N.V.	.....	28	July 24, 1888	1865	Slightly scarred	2
156	178	5	Inf.	0	38	Nov. 6, 1888	1854	Much pitted	4
157	190	5	Inf.	0	27	Dec. 4, 1888	1866	Much pitted	4
158	192	5	N.V.	.....	23	Jan. 9, 1889	1871	Large area	3*b*
159	214	5	N.V.	.....	39	Mar. 19, 1889	1855	Sparsely, but sharply scarred	3*a*
160	235	5	N.V.	.....	38	July 9, 1889	1856	Distinctly pitted	3
161	320	5	N.V	.....	37	May 22, 1890	1858	Slightly marked	2
162	338	5	N.V.	.....	35	Nov. 11, 1890	1860	Moderately pitted	3
163	343	5	N.V.	.....	60	Jan. 7, 1891	1836	Considerably marked	3
164	353	5	N.V.	.....	30	July 27, 1891	1866	Much pitted	4
165	356	5	N.V.	.....	34	Aug. 1891	1872	Pitted	3
166	371	5	Inf.	0	24	April 21, 1892	1873	Severely pitted on face	5
167	398	5	N.V.	.....	34	Mar. 7, 1893	1864	Pits tolerably numerous	2
168	408	5	N.V.	.....	50	June 20, 1893	1848	Severely pitted	5
169	413	5	Inf.	0	32	Aug. 17, 1893	1866	Area of scars small, but deep; not numerous	3*a* 5
170	431	5	N.V.	.....	28	Mar. 21, 1894	1866	Severely pitted	2
171	438	5	N.V.	.....	40	June 21, 1894	1859	Slightly scarred	
172	38	5·5	N.V.	.....	46	Feb. 15, 1887	1866	Slightly scarred	3
173	352	5·5	N.V.	.....	38	July 25, 1891	1858	Pitted	
174	50	6	N.V.	.....	33	Mar. 25, 1887	1870	Pitted, but not severely	
175	57	6	N V.	.....	27	May 10, 1887	1866	Slightly pitted	
176	88	6	N.V.	.....	34	July 30, 1887	1859	Not severely scarred	
177	98	6	N.V.	.....	28	Aug. 17, 1887	1865	Scarred on face	
178	114	6	Inf.	1 plain / very indistinct	30	Sept. 13, 1887	1871	Small scattered, but deep pits	
179	121	6	Inf.	1 / slightly fov.	29	Oct. 20, 1887	1864	Slightly pitted	
180	155	6	Inf.	1	35	May 31, 1888	1859	Deeply scarred, damage to left eye	2
181	166	6	Inf.	0	28	July 24, 1888	1866	Slightly scarred	2
182	284	6	N.V.	.....	25	Jan. 30, 1890	1871	Scarred lightly	2
183	294	6	N.V.	.....	25	Feb. 13, 1890	1870	Pitted on face, not severely	3
184	315	6	Inf.	0	31	May 13, 1890	1865	Marked	3
185	404	6	Inf.	0	28	May 25, 1893	1871	Face scarred	

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186	411	6	N.V.	.....	27	July 20, 1893	1872	Pitted perceptibly	3
187	418	6	N.V.	.....	32	Oct. 24, 1893	1867	Much scarred	4
188	244	6·5	N.V.	.....	34	July 30, 1889	1862	Severely marked	5
189	440	6·5	Inf.	0	28	July 9, 1894	1859	Considerably pitted	3
190	40	7	Inf.	1	35	Feb. 15, 1887	1859	Not recorded	
191	79	7	N.V.	.....	31	July 7, 1887	1863	Deeply scarred	
192	110	7	N.V.	.....	31	Aug. 30, 1887	1863	Severely scarred	
193	137	7	N.V.	.....	47	Jan. 10, 1888	1847	Markedly pitted	
194	157	7	N.V.	.....	57	June 21, 1888	1839	Considerably scarred	3
195	188	7	N.V.	.....	45	Nov. 20, 1888	1850	Scarred	3
196	217	7	Inf.	2 large irregular	22	Mar. 27, 1884	1874	Slightly marked	2
197	228	7	Inf.	0	54	May 16, 1889	1842	Slightly marked	2
198	234	7	N.V.	.....	37	July 3, 1889	1850	Scarred, with large area of pock marks	3
199	305	7	Inf.	0	26	April 15, 1890	1871	Small but numerous pits	4*a*
200	323	7	Inf.	0	24	June 11, 1890	1873	Much pitted	4
201	334	7	N.V.	.....	26	Oct. 15, 1890	1871		
202	350	7	N.V.	.....	49	July 27, 1891	1849	Pitted	3
203	355	7	N.V.	.....	36	July, 1891	1862	Considerably scarred	3
204	357	7	Inf.	0	29	Aug., 1891	1869	Small but numerous pits	4*a*
205	373	7	Inf.	0	26	May 10, 1892	1870	Sparsely but largely scarred	3*b*
206	384	7	Inf.	0	25	Oct. 13, 1892	1874	Very severely pitted	6
207	391	7	Inf.	2 fov.	20	Jan. 25, 1893	1882	Pitted slightly	2
208	436	7	N.V.	.....	33	May 29, 1894	1868	Sparsely, but area of scar large	3*b*
209	449	7	N.V.	.....	33	Nov. 1, 1894	1868	Sparsely, but area of scar large	3*b*
210	198	7·5	Inf.	0	32	Jan. 31, 1889	1864	Slightly pitted	2
211	28	8	N.V.	.....	20	July 23, 1886	1870	Deeply pitted	
212	52	8	N.V.	.....	28	Mar. 30	1867	Pitted	
213	68	8	Inf.	1 very faint and indistinct	43	June 14, 1887	1852	Slightly marked	
214	102	8	N.V.	.....	28	Aug. 23, 1887	1867	Face much scarred	

215	160	8	Inf.	0	23	July 4, 1888	1873	Slightly scarred	2
216	173	8	Inf.	1 fov. well marked	28	Oct. 2, 1888	1868	Severely scarred	4
217	204	8	N.V.	.....	37	Feb. 20, 1889	1860	Considerably scarred	3
218	211	8	N.V.	.....	35	Mar. 19, 1889	1862	Not severely pitted	2
219	225	8	N.V.	.....	28	May 7, 1889	1869	Sparsely scarred, but area large	3*b*
220	267	8	Inf.	0	34	Oct. 8, 1889	1863	Slightly marked	2
221	277	8	Inf.	0	26	Nov. 12, 1889	1871	Slightly marked	2
222	296	8	Inf.	0	24	Feb. 25, 1890	1874	Slightly marked	2
223	347	8	Inf.	0	45	May 19, 1890	1854	Slightly marked	2
224	367	8	N.V.	.....	21	Mar. 1, 1892	1879	Considerably scarred	3
225	375	8	N.V.	.....	40	May 19, 1892	1860	Face much scarred	5
226	419	8	N.V.	.....	27	Oct. 26, 1893	1874	Slightly pitted	1
227	420	8	Inf.	0	15	Oct., 1893	1886	?	
228	442	8	Inf.	0	32	Aug. 21, 1894	1870	Considerably pitted	3
229	450	8	Inf.	0	26	Nov. 1, 1894	1876	Severely scarred	5
230	456	8	N.V.	.....	48	Jan. 9, 1895	1865	...	3*b*
231	11	9	N.V.	.....	9	April 10, 1885	1885	Both eyes lost entirely; face disfigured; most of hair gone	
232	24	9	Inf.	2 faint and indistinct	30	Dec. 30, 1885	1881	Scarred on face	
233	29	9	N.V.	.....	30	Jan. 8, 1887	1866	Much marked	
234	118	9	N.V.	.....	25	Sept. 27, 1887	1878	Badly pitted	
235	135	9	N.V.	.....	33	Dec. 24, 1887	1863	Considerably marked	
236	197	9	Inf.	3	25	Jan. 31, 1889	1873	Pitting distinct and moderately thick	3*a*
237	251	9	Inf.	0	45	Aug. 21, 1889	1853	Slightly scarred	1
238	286	9	N.V.	.....	28	Feb. 4, 1890	1869	Much scarred	4
239	295	9	Inf.	0	23	Feb. 19, 1890	1876	...	3*b*
240	409	9	Inf.	0	33	July 19, 1893	1869	Severely pitted	5
241	432	9	N.V.	.....	25	Mar. 27, 1894	1878	Severely pitted	5
242	439	9	Inf.	0	24	June 21, 1894	1879	Pitting of face; moderately large and tolerably numerous	3
243	414	9·5	Inf.	2 fov.	37	Aug. 17, 1893	1865	Slightly scarred	2
244	43	10	N.V.	.....	32	Feb. 24, 1887	1867	Slightly scarred	
245	73	10	Inf.	0	25	June 23, 1887	1872	Slightly scarred	
*246	130	10	Inf.	Not examined	23	June 29, 1887	1874	Slightly marked	
247	156	10	N.V.	.....	29	June 9, 1888	1869	Much pitted	4

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248	212	10	N.V.	.....	34	Mar. 19, 1889	1865	Not severely pitted	2
249	221	10	Inf.	2	18	April 16, 1889	1881	Slightly scarred	2
250	248	10	Inf.	0	21	Aug. 15, 1889	1878	Much scarred	5
251	253	10	N.V.	.....	30	Aug. 20, 1889	1869	...	3½
252	257	10	N.V.	.....	40	Sept. 24, 1889	1859	Scarred	3
253	268	10	N.V.	.....	22	Oct. 9, 1889	1877	Scarred	3
254	282	10	N.V.	.....	49	Jan. 14, 1890	1850	Severely pitted	5
255	321	10	Inf.	0	21	May 22, 1890	1879	Much pitted	4
256	435	10	Inf.	3 very indistinct	39	April 24, 1894	1865	Irregularly scarred, with moderate disfigurement	3
257	422	10·5	N.V.	.....	43	Nov., 1893	1861	Marked, especially about upper part of face	3
258	5	11	N.V.	.....	34	Mar. 3, 1885	1861	Much pitted on face	
259	33	11	Inf.	2 faint	33	Feb. 1, 1887	1865	Pitted perceptibly	
260	80	11	Inf.	1	24	July 7, 1887	1874	Not deeply pitted	
261	144	11	Inf.	1 indistinct scar	38	Feb. 22, 1888	1861	Not much marked. This patient is said to have had a second attack of smallpox in 1881	
262	161	11	Inf.	0	26	July 12, 1888	1871	Scarred on face	4
263	219	11	N.V.	.....	18	April 10, 1889	1882	Much scarred; eye lost	4
264	325	11	N.V.	.....	16	July 2, 1890	1885	Pitted on face	3
265	340	11	N.V.	.....	45	Nov. 18, 1890	1856	Much scarred	4
266	447	11	N.V.	.....	32	Oct. 17, 1894	1873	Considerably scarred	3
267	416	11·5	Inf.	3 well-marked and very good	20	Aug. 31, 1893	1885	Slightly marked	2
268	7	12	N.V.	.....	36	Mar. 17, 1885	1860	Face much and deeply scarred	
269	37	12	Inf.	0	34	Feb. 12, 1887	1866	Slightly scarred	
270	41	12	Inf.	0	32	Feb. 16, 1887	1867	Slightly scarred	
271	47	12	Inf.	3	36	Mar. 22, 1887	1863	Slightly pitted	
272	59	12	Inf.	2 indistinct	20	June 2, 1887	1879	Very slightly pitted	
273	75	12	Inf.	3 fov.	21	June 28, 1887	1878	Heavily scarred	

*274	150	12	Inf.	? scar	28	May 8, 1888	1872	Scarred	
275	196	12	Inf.	0		Jan. 30, 1889			
276	210	12	Inf.	0	30	Mar. 14, 1889	1871	Scarred much and unlimited	4
277	222	12	Inf.	2 not fov.	28	April 16, 1889	1873	Slightly scarred	2
278	224	12	Inf.	0	32	April 27, 1889	1869	Evidently scarred	3
279	246	12	Inf.	4 fov.	29	Aug. 13, 1889	1872	Very slightly scarred	1
280	279	12	N.V.	.....	23	Nov. 21, 1889	1878	Much pitted	4
281	370	12	N.V.	.....	23	Mar. 24, 1892	1881		3*b*
282	372	12	N.V.	.....	24	May 6, 1892	1880	Very severely pitted	6
283	386	12	Inf.	1 fov.	27	Oct. 25, 1892	1877	Pitted on face	2
284	410	12	Inf.	4	21	July 22, 1893	1884	Pitted perceptibly	3
285	412	12	Inf.	2	35	Aug. 1, 1893	1871	Pits on face numerous but of small area	4*a*
286	415	12	N.V.	.....	33	Aug. 29, 1893	1872	Not much marked	2
287	417	12	N.V.	.....	26	Aug. 30, 1893	1879	Scarred	3
288	22	13	Inf.	3 faint cicatrices	13	Nov. 1885	1885	Much pitted	
289	31	13	Inf.	2 very faint	29	Jan. 25, 1887	1867	Markedly pitted	
290	74	13	Inf.	1	23	June 28, 1887	1877	Pitting of face thickly distributed, but small area	
291	81	13	Inf.	1 good fov.	31	July 12, 1887	1870	Slightly scarred	
292	99	13	Inf.	1 in unusual position on back of shoulder	19	Aug. 17, 1887	1881	Scarred on face	
293	169	13	N.V.	.....	29	July 31, 1888	1872	Face pitted	3
294	231	13	Inf.	3 fovs. round margins	23	May 12, 1889	1879	Scarred	3
295	238	13	Inf.	0	25	July 16, 1889	1867	Scarred	3
296	288	13	Inf.	3 faint, scarcely discernible	29	Feb. 6, 1890	1874	Slightly pitted	2
297	301	13	Inf.	1 very faint	23	Mar. 18, 1890	1880	Area of pock-marks small	4
298	310	13	Inf.	1	20	April 17, 1890	1882	Slightly pitted	2
299	317	13	Inf.	3 very indistinct	26	May 13, 1890	1877	Slightly pitted	2
300	361	13	Inf.	2 very indistinct	27	Dec. 1, 1891	1877	Slightly pitted	2

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301	362	13	N.V.	.....	49	Jan. 12, 1892	1856	Much pitted	4
302	387	13	Inf.	4 slightly fov.	24	Nov. 17, 1892	1881	Slightly pitted	2
303	433	13	Inf.	1 fov.	29	April 17, 1894	1878	Slightly pitted	2
304	453	13	Inf.	5	23	Jan. 2, 1895	1885	Slightly marked	1
305	19	14	Inf.	4	27	Aug. 5, 1887	1872		
306	51	14	N.V.	.....	33	Mar. 25, 1887	1868	Slightly pitted	
307	78	14	N.V.	.....	25	July 6, 1887	1876	Scarred very perceptibly	
308	93	14	Inf.	2 plain and indistinct scars	35	Aug. 4, 1887	1866	Slightly marked	
309	136	14	N.V.	.....	23	Dec. 27, 1887	1878	Very badly pitted	
310	233	14	Inf.	2	19	June 26, 1889	1884	Slightly scarred, but has lost eyes from smallpox	4*a*
311	243	14	Inf.	3	24	July 27, 1889	1869	Slightly marked	2
312	259	14	Inf.	0	28	Oct. 1, 1889	1875	Slightly scarred	2
313	276	14	Inf.	1 not characteristic	40	Nov. 12, 1889	1863	Considerably scarred	3
314	298	14	Inf.	0	26	Mar. 4, 1890	1878	Considerably scarred	3
315	304	14	N.V.	.....	24	Mar. 27, 1890	1880	Severely pitted	5
316	349	14	Inf.	0	24	June 10, 1891	1881	Much scarred	4
317	364	14	N.V.	.....	39	Feb. 6, 1892	1867	Slightly pitted	2
318	426	14	N.V.	.....	28	Jan. 30, 1894	1880	Thickly pitted on face	3
319	434	14	Inf.	0	34	April 18, 1894	1874	Considerably marked	3
320	441	14	Inf.	0	24	July 31, 1894	1884	Very thickly pitted, but small area	4*a*
321	17	15	N.V.	.....	29	July 6, 1885	1871	Face scarred; ectropion of lower eyelid	
322	84	15	N.V.	.....	23	July 13, 1887	1879	Much pitted	
323	94	15	Inf.	0	50	Aug. 10, 1887	1852	Slightly but distinctly marked	
324	171	15	Inf.	4	?	Aug. 28, 1888	?	Thickly congregated, but small area	4*a*
325	177	15	Inf.	3	26	Oct. 25, 1888	1877	Small but numerous pits	4*a*
326	229	15	N.V.	.....	38	May 16, 1889	1889	Scarred	3

327	239	15	Inf.	0	23	July 23, 1889	1881	Severely scarred	5
328	260	15	Inf.	0	36	Oct. 1, 1889	1868	Slightly marked	2
329	291	15	Inf.	1 / well marked, and fov. round margins	32	Feb. 11, 1890	1875	Small numerous scars	4*a*
330	297	15	Inf.	3 / badly marked	23	Feb. 25, 1890	1881	Pitted severely	5
331	308	15	N.V.	.....	39	April 17, 1890	1866	Severely pitted	5
332	369	15	Inf.	0	36	Mar. 15, 1892	1871	Considerably scarred	3
333	379	15	Inf.	0	30	Sept. 6, 1892	1877	Considerably scarred	3
334	380	15	Inf.	3	22	Sept. 6, 1892	1885	Thickly pitted; area of scar small	4*a*
335	390	15	Inf.	1 / good scar fov.	26	Jan. 19, 1893	1882	Pitted slightly	2
336	30	16	Inf.	6 / plain, well marked	33	Jan. 25, 1887	1870	Considerably scarred	
337	146	16	Inf.	1	33	April 25, 1888	1871	Scarred	
338	152	16	Inf.	0	40	May 23, 1888	1864	Slightly scarred	
339	183	16	N.V.	.....	26	Nov. 8, 1888	1878	Slightly scarred	2
340	220	16	Inf.	6 / plain	33	April 11, 1889	1872	Slightly scarred	2
341	255	16	Inf.	3 / indistinct	32	Sept. 26, 1889	1873	Slightly scarred	2
342	261	16	Inf.	4 / plain	23	Oct. 2, 1889	1882	Severely marked; blind both eyes	4
343	264	16	Inf.	3 / faint	28	Oct. 3, 1889	1877	...	4*a*
344	287	16	Inf.	2 / well marked and fov.	21	Feb. 6, 1890	1885	Very slightly scarred	1
345	307	16	Inf.	0	36	April 15, 1890	1870	Scarred on face	3
346	319	16	Inf.	0	32	May 16, 1890	1874	Slightly scarred	2
347	359	16	Inf.	1	36	Nov. 11, 1891	1871	Pitted	2
348	363	16	Inf.	1 / fov.	23	Feb. 3, 1892	1885	Pitted	3
349	365	16	Inf.	0	40	Feb. 23, 1892	1868	Face considerably scarred, especially about nose	3
350	388	16	Inf.	2 / faintly fov.	22	Nov. 29, 1892	1886	Slightly pitted	2
351	2	17	N.V.	.....	45	Jan. 20, 1885	1844	Face much scarred	

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352	44	17 days	Inf.	1	33	Mar. 10, 1887	1870	...	
353	85	17	Inf.	1 very indistinct and plain scar.	32	July 16, 1887	1872	Pitted, especially in regions of freckles of face	
354	87	17	Inf.	0	32	July 19, 1887	1870	Scarred, but not badly	
355	89	17	Inf.	3 distinct	24	Aug. 2, 1887	1880	Slightly, almost imperceptibly marked	1
356	131	17	Inf.	1 fov.	37	Nov. 22, 1887	1867	Marked	
357	145	17	Inf.	3	30	May 1, 1888	1859	Not much scarred	
358	195	17	Inf.	3	27	Jan. 17, 1889	1879	Slightly pitted	2
359	348	17	Inf.	5	37	May 31, 1891	1871	Small area, but numerous	4*a*
360	421	17	Inf.	1	30	Oct. 26, 1893	1880	Slightly pitted, especially about nose	2
361	427	17	Inf.	1	39	Jan. 13, 1894	1872	Slightly marked	2
*362	21	18	Inf.	5 days before attack of smallpox	27	Aug., 1885	1876	Pitted on face	
363	34	18	N.V.	.....	31	Feb. 1, 1887	1869	Face pitted	
364	132	18	Inf.	0	33	Dec. 13, 1887	1872	Much pitted	
365	205	18	Inf.	1 well marked	22	Feb. 21, 1889	1885	Scarring hardly perceptible	0
366	213	18	Inf.	1 fov.	24	Mar. 19, 1889	1883	Sparsely but sharply scarred	3*a*
367	241	18	Inf.	2	27	July 25, 1889	1880	Slightly marked	2
368	281	18	Inf.	1 fov.	29	Jan. 15, 1890	1878	Pitted in centre of face	3
369	300	18	N.V.	.....	48	Mar. 6, 1890	1860	Scarred	3
370	318	18	Inf.	0	27	May 16, 1890	1881	Slightly pitted	2
371	322	18	Inf.	0	38	May 22, 1890	1870	Severely pitted	5
372	402	18	Inf.	4 good fov.	28	April 27, 1893	1883	Area of scars small but numerous	3*a*
373	23	19	Inf.	0	44	Jan., 1886	1860	Not much scarred	
374	66	19	Inf.	2 fov.	34	June 16, 1887	1872	Slightly pitted	
375	70	19	Inf.	1 fov.	28	June 22, 1887	1878	Thickly, but not distinctly scarred	

376	97	19	Inf.	2 fov. distinct	40	Aug.	16, 1887	1866	Slightly scarred	
377	189	19	Inf.	3 very faint and plain	34	Nov.	22, 1888	1869	Slightly pitted	2
378	293	19	Inf.	4 very faint	26	Feb.	13, 1890	1883	Scarred	3
379	302	19	Inf.	3	24	Mar.	25, 1890	1886	Pitted, especially about nose	3
380	336	19	Inf.	3 very faint	28	Oct.	29, 1890	1881	Moderately pitted	3
381	344	19	N.V.	.....	40	Jan.	24, 1891	1871	Much scarred	4
382	396	19	Inf.	5 indistinct	41	Mar.	2, 1893	1871	Severely pitted	5
383	443	19	Inf.	2 fov.	42	Aug.	22, 1894	1871	Much marked, with sinuous white lines interwoven among the scars	4
384	18	20	N.V.	.....	45	July,	1885	1860	Face scarred with variola soon after marriage	
385	60	20	Inf.	2 fov.	28	June	2, 1887	1879	Slightly pitted	
386	113	20	Inf.	2 fov.	36	Sep.	13, 1887	1871	Slightly pitted	
387	123	20	Inf.	3 fov.	28	Oct.	27, 1887	1877	Not scarred	
388	202	20	Inf.	3 slightly fov.	24	Feb.	9, 1889	1885	Considerably scarred about nose	3
389	223	20	Inf.	3 fov.	38	April	16, 1889	1871	Slightly scarred	2
390	406	20	Inf.	1	32	June	13, 1893	1881	Small area, but confluent	4*a*
391	445	20	Inf.	1	43	Aug.	28, 1894	1871	Not much disfigured	4*a*
392	100	21	N.V.	.....	27	Aug.	18, 1887	1881	Face scarred	
393	103	21	Inf.	2 slightly fov.	37	Aug.	23, 1887	1871	Face scarred	
394	162	21	Inf.	6 plain	32	July	12, 1888	1877	Slightly scarred	2
395	194	21	N.V.	.....	26	Jan.	17, 1889	1883	Severely pitted	5
396	207	21	Inf.	2	32	Feb.	26, 1889	1878	Scarred	3
397	237	21	Inf.	6 indistinct	27	July	10, 1889	1868	Slightly scarred	2
398	360	21	Inf.	0	27	Nov.	19, 1891	1885	Numerous pits, but of small area	4
399	366	21	Inf.	4 fov. well marked	27	Feb.	25, 1892	1871	Slightly marked	2
400	424	21	Inf.	5 indistinct	30	Jan.	2, 1894	1884	Not much pitted, chiefly about nose, small area	3*a*
401	428	21	Inf.	3 very faint	34	Jan.	13, 1894	1881	Slightly marked	2

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402	20	22	Inf.	3	36	Aug., 1885	1871	Pitted	
403	35	22	Inf.	2 faint and plain	35	Feb. 4, 1887	1874	Slightly scarred on face	
404	82	22	Inf.	0	29	July 14, 1887	1880	Face frightfully scarred	
405	119	22	Inf.	5	31	Oct. 4, 1887	1878	Slightly scarred	
406	139	22	Inf.	1 (?) scar	39	Jan. 17, 1888	1870	Markedly pitted	3
407	168	22	Inf.	2	26	July 26, 1888	1866	Slightly scarred	2
408	174	22	Inf.	3 fov.	26	Oct. 16, 1888	1884	Slightly scarred	2
409	175	22	N.V.	.....	38	Oct. 25, 1888	1872	Markedly pitted	3
410	395	22	N.V.	.....	52	Mar. 2, 1893	1863	Scarred	3
411	397	22	Inf.	2	30	Mar. 9, 1893	1871	Scarred on face	2
412	446	22	Inf.	4 2 fov. and 2 very indistinct	23	Aug. 29, 1894	1893	Not scarred	0
413	163	23	Inf.	3	33	May, 1888	1878	Scarred	4
414	326	23	N.V.	.....	28	July, 1890	1885	Pitted on face	3
415	15	24	Inf.	0	24	May 7, 1885	1885	Face much marked with recent small-pox	
416	216	24	Inf.	1 well marked	28	Mar. 27, 1889	1885	Much scarred	4*a*
417	309	24	Inf.	1 faintly fov.	32	April 17, 1890	1882	Pits small but numerous	4*a*
418	329	24	Inf.	1?	30	Aug. 7, 1890	1884	Scarred, large but superficial	3
419	341	24	Inf.	1 very faint	29	Nov. 13, 1890	1885	Not recorded	
420	382	24	Inf.	0	35	Sept. 20, 1892	1881	Pitted on face, chiefly about nose	3
421	182	25	Inf.	1 plain	28	Nov. 6, 1888	1885	Small, but thickly scattered	4*a*
422	273	25	Inf.	3 faintly fov.	32	Oct. 26, 1889	1882	Slightly scarred	2
423	292	25	N.V.	.....	36	Feb. 12, 1890	1879	Severely scarred	5
424	58	26	Inf.	2 plain	36	June 2, 1887	1877	Pitted	

425	278	26	N.V.	.....	37	Nov. 21, 1889	1878	Considerably scarred	3
426	377	26	Inf.	2 imperfectly fov.	32	June 16, 1892	1886	Thickly pitted, but small area	4*a*
427	437	26	Inf.	0	24	June 21, 1894	1879	Pitting of face moderately large and tolerably numerous	3
428	9	27	N.V.	.....	27	Mar. 25, 1885	1885	Severe keratitis; face much pitted; hair gone	
429	25	27	N.V.	.....	35	July 28, 1886	1878	Scarred obviously on face, but not deeply	
430	112	27	Inf.	5	36	Sept. 13, 1887	1878	Slightly marked	
431	258	27	Inf.	3 indistinct	35	Sept. 28, 1889	1881	Slightly marked	2
432	303	27	Inf.	1 plain	35	Mar. 26, 1890	1882	Slightly marked	2
433	330	27	Inf.	2 indistinct	33	Aug. 12, 1890	1884	Small area, but very numerous	4*a*
434	368	27	Inf.	2 distinct fov.	29	Mar. 2, 1892	1890	Very much scarred	4
435	240	28	Inf.	4	45	July 25, 1889	1872	Slightly marked	2
436	263	28	Inf.	2 very faint	36	Oct. 3, 1889	1881	Slightly marked	2
437	56	29	Inf.	1 faint	34	May 11, 1887	1882	Pitted	
438	140	29	Inf.	0	49	Jan. 17, 1888	1868	Sight of right eye gone and deaf in left ear from smallpox; very much disfigured	
439	400	29	Inf.	3	40	April 6, 1893	1883	Face marked irregularly; tolerably numerous	3
440	1	30	N.V.	.....	52	Nov. 1, 1884	1862	Face much scarred	
441	4	30	Inf.	3	30	Mar., 1885	1884	...	
442	26	30	Inf.	3 faint	34	Dec. 8, 1887	1884	Scarred on face, not deeply	
443	138	30	Inf.	1 fov.	33	Jan. 14, 1888	1885	Severely pitted	
444	185	30	N.V.	.....	34	Nov. 15, 1888	1884	Scarred	3
445	209	30	Inf.	1	35	Mar. 14, 1889	1884	Sparsely, though sharply scarred	3*a*
446	274	30	Inf.	1 well marked, not fov.	52	Oct. 31, 1889	1859	Considerably scarred, small area	3
447	381	30	Inf.	1 very plain	41	Sep. 15, 1892	1881	White medium-sized scars, not very numerous	2
448	101	33	Inf.	2, quite plain and indistinct	39	Aug. 20, 1887	1881	Face much pitted	

No. in series.	No. in Case-book.	Age when attacked.	Whether vaccinated with effect before having smallpox.	If vaccinated, number and area of scars, the average diameter of scar represented by a line.	Age of patient at time of observation.	Date of observation.	Year patient had smallpox.	Remarks.	
449	111	33	Inf.	0	40	Sept. 3, 1887	1880	Slightly marked	
450	61	34	Inf.	1 / indistinct	45	June 4, 1887	1876	Slightly marked	
451	313	34	Inf.	4 / fov.	39	May 1, 1890	1885	Considerably pitted, especially about nose	3
452	403	34	Inf.	0	49	April 25, 1893	1878	Severely pitted	5
453	55	36	N.V.	.....	62	May 10, 1887	1861	Pitted, the scars not deep but white	
454	172	36	N.V.	.....	43	Aug. 29, 1888	1881	...	4*a*
455	76	37	Inf.	1 / distinct fov.	41	June 29, 1887	1883	Slightly marked	
456	337	38	Inf.	0	39	Nov. 11, 1890	1889	Moderately pitted	3

Cases that could or would not say the date they had smallpox.

†	3	?	Could not say as to vaccination	No scar	18	Mar. 3, 1885	?	Much pitted on face	
†	13	?	Not	.....	4½	April 28, 1885	?	Left eye destroyed	
†	14	?	?	?	?	April 28, 1885	?	Blind from smallpox	

Table II.

Admittedly unvaccinated.	Stated to have been vaccinated, but having 0 scars.	Having 1 scar.	Having 2 scars.	Having 3 scars.	Having 4 scars.	Having 5 or more scars.
Days.	Days.					
3	...	...	...	...	...	...
3	...	...	...	...	...	...
7	...	...	...	...	...	...
14	...	...	...	...	...	...
21	21	...	...	...	...	...
28	...	...	...	...	...	...
35	...	...	...	...	...	...
42	...	...	...	...	...	...
42	...	...	...	...	...	...
42	...	...	...	...	...	...
42	...	...	...	...	...	...
42	...	...	...	...	...	...
49	...	...	...	...	...	...
61	61	...	...	...	...	...
63	...	...	...	...	...	...
90	90	...	...	...	...	...
91	91	...	...	...	...	...
106	92	...	...	...	...	...
122	...	...	...	...	...	...
122	152	...	...	...	...	...
182	...	...	...	...	...	...
182	...	...	...	...	...	...
182	...	...	...	...	...	...
183	...	...	...	...	...	...
183	...	...	...	...	...	...
183	...	...	...	...	...	...
213	...	...	...	...	...	...
213	...	...	...	...	...	...
274	...	...	...	...	...	...
274	...	...	...	...	...	...
275	...	...	...	...	...	...
304	...	...	...	...	...	...
304	...	...	...	...	...	...
304	...	...	...	...	...	...
335	...	...	...	...	...	...
335	...	...	...	...	...	...
Years.	Years.					
1	1	...	...	...	...	...
1	1	...	...	...	...	...
1	1	...	...	...	...	...
1	1	...	...	...	...	...
1	1	...	...	...	...	...
1	1	...	...	...	...	...
1	1	...	...	...	...	...

Admittedly unvaccinated.	Stated to have been vaccinated, but having 0 scars.	Having 1 scar.	Having 2 scars.	Having 3 scars.	Having 4 scars.	Having 5 or more scars.
Years.	Years.					
1	1	...	...	...	...	...
1	...	...	...	...	...	...
1·16	...	...	...	...	...	...
1·33	...	...	...	..	...	...
1·5	1·5	...	...	...	...	...
1·5	1·5	...	...	...	...	...
1·83	1·5	...	...	...	...	...
2	2	2	...	...	...	...
2	2	...	...	...	...	...
2	2	...	...	...	...	...
2	2	...	...	...	...	...
2	2	...	...	...	...	...
2	2	...	...	...	...	...
2	...	...	...	...	...	...
2	...	...	...	...	...	...
2	...	...	...	...	...	...
2	...	...	...	...	...	...
2	...	...	...	...	...	...
2	...	...	...	...	...	...
2	...	...	...	...	...	...
2	...	...	...	...	...	...
2	...	...	...	...	...	...
2	...	...	...	...	...	...
2·5	2·5	...	...	...	...	...
2·5	2·5	...	...	...	...	...
2·5	...	...	...	...	...	...
2·83	...	...	...	...	...	...
3	3	...	...	...	...	...
3	3	...	...	...	...	...
3	3	...	...	...	...	...
3	3	...	...	...	...	...
3	3	...	...	...	...	...
3	3	...	...	...	...	...
3	...	...	...	...	...	...
3	...	...	...	...	...	...
3	...	...	...	...	...	...
3	...	...	...	...	...	...
3	...	...	...	...	...	...
3	...	...	...	...	...	...
3	...	...	...	...	...	...
3	...	...	...	...	...	...
3	...	...	...	...	...	...
3	...	...	...	...	...	...
3	...	...	...	...	...	...
3	...	...	...	...	...	...
3	...	...	...	...	...	...
3	...	...	...	...	...	...
3·5	...	...	...	...	...	...
4	4	...	...	...	...	...
4	4	...	...	...	...	...

Admittedly unvaccinated.	Stated to have been vaccinated, but having 0 scars.	Having 1 scar.	Having 2 scars.	Having 3 scars.	Having 4 scars.	Having 5 or more scars.
Years.	Years.	Years.	Years.			
4	4	...	...	...	...	...
4	...	...	...	...	...	...
4	...	...	...	...	...	...
4	...	...	...	...	...	...
4	4	...	...	...	...	...
4	4	...	...	...	...	...
4	4	...	...	...	...	...
4	...	...	...	...	...	...
4·5	...	...	...	...	...	...
5	5	...	...	...	...	...
5	5	...	...	...	...	...
5	5	...	...	...	...	...
5	5	...	...	...	...	...
5	5	...	...	...	...	...
5	...	...	...	...	...	...
5	...	...	...	...	...	...
5	...	...	...	...	...	...
5	...	...	...	...	...	...
5	...	...	...	...	...	...
5	...	...	...	...	...	...
5	...	...	...	...	...	...
5	...	...	...	...	...	...
5	...	...	...	...	...	...
5	...	...	...	...	...	...
5	...	...	...	...	...	...
5	...	...	...	...	...	...
5·5	...	...	...	...	...	...
5·5	...	...	...	...	...	...
6	6	6	...	...	...	...
6	6	6	...	...	...	...
6	6	6	...	...	...	...
6	...	...	...	...	...	...
6	...	...	...	...	...	...
6	...	...	...	...	...	...
6	...	...	...	...	...	...
6	6·5	...	...	...	...	...
6·5	...	...	...	...	...	...
7	7	7	7	...	...	...
7	7	...	7	...	...	...
7	7	...	...	...	...	...
7	7	...	...	...	...	...
7	7	...	...	...	...	...
7	...	...	...	...	...	...
7	...	...	...	...	...	...
7	...	...	...	...	...	...
7	...	...	...	...	...	...
7	7·5	...	...	...	...	...
8	8	8	...	...	...	...
8	8	8	...	...	...	...

Admittedly unvaccinated.	Stated to have been vaccinated, but having 0 scars.	Having 1 scar.	Having 2 scars.	Having 3 scars.	Having 4 scars.	Having 5 or more scars.
Years.	Years.	Years.	Years.	Years.	Years.	Years.
8	8	...	...	...	...	...
8	8	...	...	...	...	...
8	8	...	...	...	...	...
8	8	...	...	...	...	...
8	8	...	...	...	...	...
8	8	...	...	...	...	...
8	...	...	...	...	...	...
8	...	...	...	...	...	...
9	9	...	9	9	...	...
9	9	...	...	...	...	...
9	9	...	...	...	...	...
9	9	...	...	...	...	...
9	...	...	...	...	...	...
9	...	...	9·5	...	...	...
10	10	...	10		...	...
10	10	...	...		...	...
10	10	...	...		...	...
10	...	...	...	...	...	...
10	10	...	...	10	...	...
10	...	...	...	...	...	...
10	...	...	...	...	...	...
10 5	...	...	...	...	...	...
11	11	11	11	...	...	...
11	...	11	...	...	...	...
11	...	...	...	...	...	...
11	...	...	...	...	...	...
11	...	...	...	11·5	...	...
12	12	12	12	12	12	...
12	12	...	12	12	12	...
12	12	...	12	...	...	...
12	12	...	...	...	...	...
12	12	. .	...	...	...	...
12	12	...	...	...	...	...
13	13	13	13	13	13	13
13	...	13	...	13	...	...
14	14	13	14	13	...	...
14	14	13	14	13	...	...
14	14	13	...	14	14	16
14	14	13	...	...	...	...
14	14	14	...	...	...	...
14	...	15	...	15	15	...
15	15	15	...	15	...	...
15	15	16	...	15	...	...
15	15	16	16	16	16	16
15	15	16	16	16	...	...
16	15	17	...	17	...	...
17	16	17	...	17	...	...
...	16	17	...	17	...	17
...	16	...	...	...	...	...
...	16	...	...	...	...	...
...	17	...	...	...	...	...

Admittedly unvaccinated.	Stated to have been vaccinated, but having 0 scars.	Having 1 scar.	Having 2 scars.	Having 3 scars.	Having 4 scars.	Having 5 or more scars.
Years.	Years.	Years.	Years.	Years.	Years.	Years.
18	18	17	18	19	18	19
18	18	17	19	19	19	21
19	18	18	19	19	21	21
20	19	18	19	20	22	21
21	21	18	20	20	28	22
21	22	19	20	20	34	27
22	24	20	21	21	...	...
22	24	20	21	22	...	...
23	26	22	22	22	...	...
25	29	24	22	23	...	...
26	33	24	22	25	...	...
27	34	24	26	27	...	...
27	38	24	26	29	...	...
30	...	25	27	30	...	...
30	...	27	27	30	...	...
36	...	29	28	...	...	...
36	...	30	33	...	...	...
...	...	30	...	...	...	...
...	...	30	...	...	...	...
...	...	30	...	...	...	...
...	...	34	...	...	...	...
...	...	37	...	...	...	...
1382·21	952·64	835	552·5	594·5	224	193
210 cases, average = 6·58 years.	105 cases, average = 9·07 years.	47 cases, average = 17·77 years.	31 cases, average = 17·82 years.	33 cases, average = 18·02 years.	12 cases, average = 18·67 years.	10 cases, average = 19·3 years.

A NOTE

ON THE

PHYSIOLOGY OF THE SPINAL CORD.

By C. S. SHERRINGTON, M.D., F.R.S.,
LECTURER ON PHYSIOLOGY IN THE SCHOOL.

The student of animal physiology is confined in his field of inquiry to a comparatively few species. Anatomists have the advantage of being able to make use of all specimens in which gross features of structure have been tolerably preserved; for the purposes of physiology the subject material must be either living or but lately dead. For this reason a half-dozen domesticated species, together with the common frog, compose practically the whole material usually examined by the physiologist. This limited range of subject-type for experiment does not prove a very serious drawback to the science in its present condition, simply because we can be confident that the great laws of physics and chemistry remain throughout all living material immutable, and because certain affinities of structure dominate the whole of Vertebrata, the class to which the problems of physiology are chiefly applied.

Anyone who pursues physiology in a laboratory connected with a medical school has his attention especially

directed to the immediate bearings of the subject upon human health and disease, and especially prominent to him become the differences existing between human physiology and the physiology of animals used ordinarily for the purpose of experiment in the laboratory.

In no domain of physiology is this more conspicuous than in that dealing with the central nervous system. I will take this opportunity of emphasising the fact by giving an instance which has come before my own notice in regard to the structure and functions of the spinal cord. In England it has become not uncommon for experiments upon the central nervous system to be carried out upon monkeys; the animal was practically introduced into the laboratory as a subject for extensive research by Professor Ferrier; in other countries it is still quite rare for any research involving a numerous series of experiments to be carried out upon the monkey, —partly no doubt on account of the cost of purchase, partly also because monkeys are not quite so readily obtainable on the Continent as they are here. The chief incentive to making use of monkeys has no doubt been the feeling that observations upon them can be made very directly applicable to human physiology. The monkey, as regards the physiology of its spinal cord and brain, is too apt to be regarded in the laboratory as little inferior to a miniature man. I believe myself, however, that the step from dog and cat to the macaque is hardly greater, than from macaque to man, for the latter passage is really so wide.

On examining microscopically a cross-section of the spinal cord of a dog when the Weigert method has been employed, one is struck by the complexity and intricacy of the network of tiniest nervous fibrils everywhere permeating the grey matter and surrounding the ganglion-cells in it. Turning to a similarly prepared section from the spinal cord of a common monkey, the network of fibrils is even more wonderful for its richness and density. On then examining a similar preparation from the human cord, what an enormous step in the direction of increased complexity is found to have been taken! The tangled network of innumerable nerve-filaments is one that simply baffles verbal description. These filaments are all of them processes from nerve-cells either

springing directly from the cells or mediately through nerve-fibres themselves the processes of nerve-cells. The greater density and extent of the forest of interlacing branches is commensurate with an enormous increase of complexity of connection, and of that it is one of the most striking objective signs we possess.

It is a favourite doctrine with certain writers on physiology, especially those imbued with enthusiasm for transcendental anatomy, that in the evolution of the central nervous system no distinct step of progress at any time gained by a unit in the chain of segments of the system has ever in future phases of phylogeny been lost by it again. It would not be difficult, I think, to overthrow their position upon this matter were it required; the mere fact of the existence of the diminutive olfactory lobe of man, or of his possession of a pineal gland instead of an interparietal eye, would be sufficient for the purpose. It is more interesting, perhaps, to examine from the above point of view the functional activity of spinal centres considered as independent, and so to say spinal organs. Complete transverse severance of the spinal cord of the dog leads of course immediately to loss of power and sensation in the muscles and other parts behind the point of section. The severance which should be completed with a single quick closure of a fine pair of scissors is accompanied by a mere twitch confined to those muscles supplied by the few fibres of the motor root next below the point of section. The urinary bladder may give a contraction, but usually not so forcibly as to expel urine. A transient rise of blood pressure is followed by a more lasting fall. For a few seconds some tone is retained in the muscles of the hind limbs, &c., below the section, then follows flaccidity and the dragging position of helpless paralysis; the knee-jerk, retained with the tonus for a few seconds, becomes inelicitable, and the temperature of the paws begins to rise because of the paralysis of the vaso-constrictors of the skin, while that of the groin falls because of the inactivity of the muscular mass underneath it. In the case of the monkey the immediate result is almost indistinguishably similar, and so probably would it be in man were the severance ever performed with a similar minimum of colla-

teral damage. But how different is the subsequent sequence of events! In the dog in the course of half an hour the knee-jerks are again elicitable, and in another hour or so have become exaggerated. The tonus of the muscles, although low, is not nearly so low as at first. This condition of low tonus of muscles and of exaggerated knee-jerk is, it seems to me, of interest, and may be worthy the attention of the clinician. I imagine it is a common clinical belief that a brisk knee-jerk goes with an *increased* tonus, or is indeed an indication of the latter. In the dog and cat an extremely brisk knee-jerk can be produced by carrying out transverse sections of the cord immediately above and below the lumbar centre on which the jerk depends, and then the tonus is extremely *low*. But to return to the condition of the dog or cat an hour after severance of the cord; the brisk knee-jerk is accompanied by increased ease of elicitation of all reflexes: a touch on the skin is sometimes sufficient to produce a movement from the limbs, which hang powerless and inaccessible to impulses descending from the higher centres.

The Italian physiologist Fœdera was the first to point out this "hyperæsthesia," as he called it; he observed it after semi-sections of the spinal cord, and thirty years later Brown-Séquard called renewed attention to it particularly as it appears after section of one lateral half of the spinal cord. Indeed, Brown-Séquard was led by this phenomenon into the error of believing that the sensory impulses immediately after entering the cord decussated, for the most part travelling up the cord on the opposite side to that on which they entered. Brown-Séquard's view, which was contrary to the teaching and experiments of Galen,[1] and to what had been established by the exact experiments of Budge, Eigenbrodt, and von Bezold, found, nevertheless, acceptance with clinicians. It required renewed experiments by Chauveau, Schiff, Miescher, Weiss, and Mott to gradually dispossess it of a general credence that it for a time obtained. The phenomenon is essentially the same whether it be produced by a partial or a total transverse lesion of the cord, although it cannot in the latter case be accompanied

[1] Galen's experiments were probably conducted on monkeys.

by the symptom of heightened sensibility, *i. e.* hyperæsthesia. For that reason I have proposed to replace the term "Fœdera's hyperæsthesia" for it by that of *local spinal exaltation*.[1] Using that term, it can be said briefly that after a short period of spinal depression lasting about an hour the performance of transverse section of the spinal cord is in the cat and dog followed by a lasting spinal exaltation in the portion of cord isolated.

In the monkey an extremely different condition ensues. When the cord is severed in the dorsal region, if the section carried out dexterously the knee-jerks are, I have found, obtainable for perhaps a minute or more immediately after performance of the section; then they disappear, and with them disappears the tonus of the muscles. The limbs hang flaccid and helpless; the temperature of the skin rises, that of the muscles falls. The general shock to the animal is slight, and in a few minutes after recovery from the anæsthetic given during the operation, which is short and not severe, I have seen the animal sitting at the window, interested in watching events passing outside. But there is, unlike the dog, no speedy recovery from this condition of depression of spinal activity to that of spinal exaltation. The speediest time in which I have ever seen the slightest return of the knee-jerks was in an experiment by Mr. A. G. Grunbaum in our laboratory here; one knee-jerk, though slight, was distinctly elicitable a week from the performance of the section; usually a fortnight or three weeks elapses before the jerk reappears. True reflexes are elicitable only with difficulty, are few in number, narrow in scope, and feeble in execution. Strange to say, they include movements of parts which are, one would think, most dominated by volition and ordinarily least given over to reflex excitation. The hamstring muscles, the flexors of the hallux, and the extensors of the toes are those muscles most easily played upon in reflex manner. The flexors of the hallux and the extensors of the toes generally reply together: tickling of the sole is the most reliable way to obtain this reply; forcible pinching of the foot seems the surest way of eliciting the contraction of the hamstrings, and with the hamstrings the flexors of the

[1] 'Phil. Trans.,' vol. clxxxiv B., p. 689.

hip often contract slightly, so that the leg is drawn a little upwards. These movements are confined to the limb which is stimulated; and if a crossed reflex to the opposite side is obtained, it almost always either solely or chiefly affects the adductor muscles of the opposite thigh. A curious reflex is to be obtained in the male: on pinching the prepuce it is usual for the hallux of each foot to simultaneously flex.

It has been recently pointed out by Dr. Bastian and by Mr. Bowlby that in man, after complete transverse severance of the cord in the dorsal region, the knee-jerks, far from becoming exaggerated, as they do in the dog and monkey, disappear and do not return. I have just stated that in the dog and monkey they disappear immediately after the severance, but return before long and become exaggerated, and that in the latter animal their abeyance may endure for from one to three weeks. It may be argued that in man the period of abeyance may be simply longer, owing to the spinal shock being greater, and it is to be remembered that the clean sections performed in the laboratory are less calculated to cause spinal shock than the rough lesions brought about by accident and disease. But the duration of the absence of the knee-jerks seems too prolonged in some of the clinical cases reported to be explained, I think, by any collateral shock. I cannot resist the impression that there exists between the physiology of the cord of man and laboratory animals in this respect a really considerable difference. It has been pointed out that after decapitation by the guillotine the knee-jerks have been obtainable for a couple of minutes or so after the head has left the body. This has been argued as showing that when the section is clean there is absence of shock, and the knee-jerks persist. But, as stated above, in laboratory animals immediately after section of the cord the jerk is obtainable for about a couple of minutes, and then it dies away, to return after a variable but always considerable interval. The initial persistence of the jerks is, I take it, of a significance altogether other than its later reappearance; it is an indication that the condition of the central part of the reflex arc on which the jerk depends is not immediately altered

by being cut off from the cerebrum,—that is, has in it, so to say, a store of cerebral influence which is not exhausted for a couple of minutes or so; or that the tide of spinal metabolism takes a certain though short time to sink to that level at which it is too low for the execution of the jerk. The real difference exists, I take it, between the spinal physiology of the ordinary laboratory animals and that of man in that the spinal afferents of man do not of themselves suffice to keep the metabolism of his spinal motor cells sufficiently brisk for the production of that muscular tonus which is the physiological substance of the jerk phenomenon. In other words, in man the cerebral component of spinal tonus is, as compared with the local or spinal component, disproportionately greater. In conformity with this it has been pointed out by Bastian that the superficial reflexes are usually in man extremely feeble after total transverse lesion of the cord, instead of being exaggerated as in the laboratory experiments.

I have said enough to illustrate, although not so sufficiently as the interest of the subject demands, how different the condition brought about by severance of the cord is in laboratory animals and in the wards; and it is interesting to note that in this instance the results obtained in monkeys, although still far remote from those observed in man, are the least remote of those obtainable in the laboratory. In the case of the cat and dog severance of the cord seems to throw the spinal centres, though separated from the rest of the central nervous system, into a state of lasting over-excitement. In the case of man a similar lesion, instead of rendering the spinal centres more awake than ever, seems to plunge them into a condition of torpor and apathy, akin to that in which they exist under the influence of deep slumber, or even that induced in them by the narcosis of morphia or of chloroform.

THE CRIMINAL RESPONSIBILITY OF THE INSANE.

By CHARLES J. CULLINGWORTH, M.D.

I ought, perhaps, in the first place to endeavour to justify my choice of subject.

The connection between obstetric medicine and the criminal responsibility of the insane is certainly not very obvious, and it may to many of you have appeared presumptuous in me to undertake to speak to you on a subject so remote from that with which my name is associated in this hospital. I have, however, some claim to a hearing. For ten years (1872 to 1882), besides being for the greater part of the time on the staff of a special hospital for women and children, I held the appointment of police surgeon to two out of the four divisions into which, for police purposes, Manchester is divided; whilst for seven years (1879 to 1885) I was Lecturer on Medical Jurisprudence in the medical department of the Owens College in that city. As police surgeon I had occasion to appear as medical witness for the Crown in many important criminal trials, in some of which the defence of insanity was set up on behalf

[1] Read before the St. Thomas's Hospital Medical and Physical Society, January 17th, 1895.

of the accused. This experience gave me a great interest in the medico-legal aspects of insanity,—greater, perhaps, than in any other of the many widely differing subjects grouped together under the general title of medical jurisprudence. Hence, when I came to have to teach medical jurisprudence, this particular subject, having already engaged much of my thought, had a special attraction for me. On relinquishing the chair in 1885 it was my duty to deliver a public address in the college, and I selected on that occasion the theme I have again chosen to-night. I am sure you will forgive me if this evening I lay my former address under somewhat heavy contribution.

For many years medical writers have been protesting against the existing law in this country with reference to the plea of insanity in criminal cases. Their protest has, however, been of little avail, for lawyers have for the most part expressed themselves as more or less contented with things as they are, and public opinion has never been sufficiently aroused on the subject to bring an alteration of the law relating to it within the range of practical politics. A notable exception to the attitude usually assumed on this question by lawyers occurred in the person of the late Mr. Justice Stephen. In his 'History of the Criminal Law of England' he frankly declares that a change is necessary, and the chapters in which he deals with the subject constitute one of the most valuable, most forcible, and at the same time most temperate contributions to the discussion that have yet appeared.

Public and professional attention has been recently directed to the subject afresh in consequence of a paper read by Dr. Lionel Weatherley before the British Medical Association, in August, 1894, at Bristol, and of the discussion that followed the reading of that paper. Since the meeting the discussion has been continued in the correspondence columns of the 'Times,' many eminent members both of the medical and legal profession having taken part in the controversy.

It is admittedly a matter of the utmost difficulty to define with anything like precision the point at which we should cease to regard crime as the result of depravity, and

treat the wrong-doer, not as a criminal, but as the victim of disease. Some writers have gone so far as to maintain that almost every criminal, and certainly every habitual criminal, ought in strict justice to be regarded as only in a very limited sense accountable for his actions. And if we set aside the interests of society, and the necessity under which every community lies to protect itself from those who offend against its laws, there is much to be said in favour of this view. It is surely unnecessary at the present day to point out that just as truly as the material brain is the organ of thought, or of the intellectual faculty, defect of or injury to certain portions of which is certainly attended with defect of or injury to the intelligence, so, too, that which has been termed (perhaps not very happily) the moral sense has its seat in the material brain, and the integrity of the moral sense is primarily dependent upon physical conditions, —that is, upon normal and healthy development, and upon freedom from injury or disease. If this proposition, stated so nakedly, should seem startling, and to savour of materialism, I would remind you that it is merely the statement of a truth that we are practically acknowledging every day. We hear of a child, for example, that betrays from its earliest years the most evil propensities, that no discipline of kindness or severity can train to truthfulness, and that comes eventually to be recognised as altogether exceptional, and neither to be treated by ordinary methods nor judged by ordinary standards; and, learning on inquiry that the child's grandfather was insane, or that his father was a confirmed drunkard, we immediately connect the two facts, and accept the one as the explanation of the other. Yet that child's moral perversion can be the result of inheritance only by being dependent upon some physical defect of brain. Let me illustrate the matter in another way. It is a fact well known to every one who has to do with insane people, that in many forms of insanity due to brain disease one of the earliest and most unmistakable symptoms is a deterioration of the moral character; the straightforward man becomes deceitful and cunning, the kind and considerate man becomes surly and self-indulgent, the pure-minded

man becomes immodest, the man of even temper becomes irritable and passionate. In attributing these signs of deterioration of the moral sense to a physical alteration which is taking place in the man's brain, we are accepting the truth of the proposition that the soundness of the moral sense depends upon the soundness of the brain, or in other words that the moral sense, equally with the intellectual powers, has a physical basis in the brain. A further illustration of the manner in which the maintaining of a correct moral standard may depend upon physical conditions is to be found in the moral breakdown that so frequently occurs as a result of overstrain and exhaustion of the nervous system. The condition to which I refer is graphically described by my late friend and colleague, Dr. Ross of Manchester, in his work on the 'Diseases of the Nervous System.' "When the nervous system," he says, "is subjected to severe strain and becomes exhausted, the conscience, which is the highest product of the evolution of character, becomes blunted, the power of self-control is enfeebled, and the individual may find that he is in the grip of a great temptation which may take years of painful struggle to overcome" (vol. ii, 2nd edit., p. 658). He goes on to show that when under these circumstances a breakdown occurs, it does so at the weakest point of the man's character, whether that weakness be inherited or acquired. "The varying strength of inherited appetites," he continues, "is admirably stated by Robert Collyer, of Chicago. 'In the far-reaching influences that go to every life,' says Mr. Collyer, 'and away backward as certainly as forward, children are born with appetites fatally strong in their nature. As they grow up the appetite grows with them, and speedily becomes a master, the master a tyrant, and by the time he arrives at manhood the man is a slave. I heard a man say that for eight-and-twenty years the soul within him had had to stand like an unsleeping sentinel, guarding his appetite for strong drink. To be a man under such a disadvantage, not to mention a saint, is as fine a piece of grace as can well be seen. There is no doctrine that demands a larger vision than this of the depravity of human nature. Old Dr. Mason used to say that as much grace as would

make John a saint would barely keep Peter from knocking a man down.' "

The subject is a fascinating one, but I have not time now to pursue it further. I only wish to show that the connection between crime and disease is much more intimate than at first sight appears; and that those who lay such stress on this connection as to doubt whether the majority of criminals are actually accountable for their actions, can adduce much testimony in support of their view, although their conclusions may be, and no doubt are, at present hopelessly impracticable.

At the other end of the scale are those writers of whom Smollett may be taken as a type, who would under no circumstances accept insanity as an excuse for crime. The passage in which Smollett gives expression to his views on the subject is worth quoting, not only because he is believed to have been the first to express these views in writing, but also because, as he puts the issue very clearly, his statement will afford us an opportunity of examining whether the opinions it embodies rest on any solid foundation. He has been describing the assassination by Earl Ferrers, of his steward, Mr. Johnson, whom his lordship believed to be implicated in a conspiracy against him. Every one who knew Earl Ferrers considered him to be insane. Madness was hereditary in the family, and at the trial the plea of insanity, which he had reluctantly allowed to be set up, was amply supported by witnesses. He was, nevertheless, condemned to death, and his execution took place without his betraying the least sign of contrition. "This unhappy nobleman's disposition," says Smollett, "was so dangerously mischievous, that it became necessary for the good of society either to confine him for life as an incorrigible lunatic, or give him up as a sacrifice to justice." And then he goes on to say, "Perhaps it might be no absurd or unreasonable regulation in the Legislature to divest all lunatics of the privilege of insanity, and, in cases of enormity, subject them to the common penalty of the law; for though, in the eye of casuistry, consciousness must enter into the constitution of guilt, the consequences of murder committed by a maniac may be as pernicious to society as those of the most criminal

and deliberate assassination; and the punishment of death can hardly be deemed unjust or rigorous when inflicted upon a mischievous being, divested of all the perception of reason and humanity."[1] I have heard similar views expressed in our own day. Every now and then there occurs a case of homicide by a madman, where the attack is so unprovoked, and its details so horrible, that the public is seized with a sense of dreadful insecurity, and men begin to wonder whether it would not be a good thing to rid society of any further risk, or trouble, or expense in connection with this particular madman, by hanging him. It might, they think, act as a deterrent on other madmen, and would be as kind to the man himself as consigning him to a lunatic asylum for the rest of his life. With regard to the deterrent effect upon other madmen, there are one or two points of which those who think such an effect possible seem to lose sight. The first is that under the present system, according to which insanity is nominally regarded as an excuse for crime, a man who is thinking of taking the life of another (and, for reasons that I shall state presently, it is chiefly in cases of homicide that insanity is pleaded) has, in the case of his being apprehended, tried, and convicted, a sufficiently fearful prospect before him. If the jury pronounce him sane he will be sentenced to be hanged, and either that sentence will be carried out, or supposing a successful appeal to be made on his behalf to the Home Secretary, the death sentence will be commuted to one of penal servitude for life. If he be found insane he will be confined to a lunatic asylum and to the company of madmen for the rest of his days. Surely nothing can be more likely to act as a deterrent than the prospect either of death, or of one of these two dreadful alternatives. But, further, the deterrent influence of a punishment can only come into play in the case of a man who is capable of reflecting before he commits a crime. In the great majority of insane homicides the capacity for reflection is either annihilated or is in abeyance; no consideration of consequences affects their conduct. And even in the case of that small number who may be supposed in some sort to weigh the conse-

[1] Smollett, 'Hist. Eng.,' 4 vols., London, 1848, vol. iv, pp. 347—356.

quences of the act they are contemplating, there is abundant evidence to show that death has no terrors for them; they regard it with calm indifference, if not as a thing to be desired and welcomed.[1] But there remains yet to be urged what is to my mind the strongest of all arguments against the indiscriminate hanging of sane and insane alike; that, namely, which is based on considerations of justice and humanity. Smollett says that to inflict the punishment of death on a mischievous being divested of his reason cannot be deemed *unjust*. Whatever men may say as to the "simplicity and convenience" of the method of treating all alike, I imagine few would be disposed to agree with Smollett in upholding its justice. It may be recommended as being "sharp, stern, and cheap;" but, as Dr. Guy says, its justice is such "as no painter or sculptor ever yet imagined, the bandage very tight over the eyes, the scales nowhere."

It must be remembered that Smollett wrote at a time when the treatment of the insane in this country was barbarous beyond description, and when, even in such large and important hospitals as Bethlem and St. Luke's, lunatics were placed in cages like wild beasts, and made objects of public exhibition. A great change has, however, taken place in the management of the insane. The humanity which has built and endowed hospitals for all kinds of bodily disease, has been extended to the unfortunate victims of mental disease, and has led to the establishment throughout the country of institutions for their care and treatment, where medical men, second in ability to none in their profession, devote their lives to the study of insanity, and to the amelioration of the condition of its victims. All this signifies that a change amounting to a complete revolution has been effected since Smollett's time in the attitude which

[1] Dr. Guy published some years ago, in the 'Journal of the Statistical Society,' a paper giving an account of a laborious analysis which he had undertaken of the figures supplied by the judicial statistics of this country for a period of seventy years; and the conclusion at which he arrived was that "the punishment of death does not act as a deterrent to the weak-minded and the insane, but, on the contrary, either attracts or fascinates them, or suggests to them thoughts of killing."

the community assumes towards the weak-minded and the insane, and a suggestion which one can imagine to have been then received with favour strikes us now as intolerable in its inhumanity.

The truth lies between these two extremes of opinion, and the law recognises this by accepting insanity, within certain limitations, as an excuse for crime. It is obvious, however, that it would be unsafe to accept the plea without requiring evidence of the insanity; "lest on the one side," to quote the quaint words of Sir Matthew Hale, "there be a a kind of inhumanity towards the defects of human nature, or, on the other side, too great an indulgence given to great crimes." Every person, therefore, accused of a crime is held to be sane and to be legally responsible for his actions until he is proved to be otherwise. In other words, whenever the plea of insanity is set up, it rests with the accused, or with those to whom his defence is entrusted, to prove the existence of the insanity. I propose now to inquire what amount of proof is necessary in order that the plea of insanity shall be sustained,—what are the tests, in short, to which the evidence in any given case is submitted, and whether those tests are in accordance with the present state of our knowledge of mental disease. It will facilitate this inquiry and further the object I have in view if I show from the records of one or two of the State trials[1] during the last and early part of the present century on what principles the decisions of our courts of law have from time to time been regulated in cases where the defence of insanity has been set up.

In the year 1723 a man named Arnold, who appears to have been of weak intellect from his birth, shot at and wounded Lord Onslow, and was defended at his trial on the ground of insanity. It was shown that he had been regarded as a lunatic by his family and neighbours for several years previously, but as his insanity had hitherto declared itself in harmless ways he had been suffered to be at large.

[1] State trials are selected because these are the only trials reported with a fulness and accuracy sufficient for our purpose, and also because, owing to their importance and to the public interest they excited, some of them have become historical.

"Among other unfounded notions, he believed that Lord Onslow, who lived in his neighbourhood, was the cause of all the tumults, disturbances, and wicked devices that happened in the country. . . . He was in the habit of declaring that Lord Onslow sent his devils and imps into his room at night to disturb his rest, and that he constantly plagued and bewitched him, . . . so that he could neither eat, drink, nor sleep for him." Under the influence of these delusions he made the attempt on the life of Lord Onslow, manifesting subsequently no compunction for what he had done. It might be thought that the evidence of insanity here was overwhelming, but the judge was not satisfied. He is reported to have told the jury "that it is not every kind of frantic humour, or something unaccountable in a man's actions, that points him out to be such a madman as is exempted from punishment; it must be a man that is totally deprived of his understanding and memory, and doth not know what he is doing, no more than an infant, than a brute, or a wild beast." The jury thereupon rejected the plea, and it was only on the intercession of Lord Onslow himself that the death sentence was commuted to one of imprisonment for life. Clearly, then, the law at that time held an insane person responsible for crime so long as he retained the slightest vestige of reasoning power. Yet it deprived him, and has ever since deprived him, of the management of himself and his affairs,—that is to say, has visited him with civil disability, on evidence of a degree of mental incapacity falling far short of such an utter deprivation of reason. It is difficult to find any logical ground for this distinction between the legal consequences of the civil and criminal acts of an insane person. To quote the words of a very able American writer on this subject, it is as if the law said to the insane man, "Your reason is too much impaired to manage your property; you are unable to distinguish between those measures which would conduce to your profit and such as would end in your ruin, and therefore it is wisely taken altogether from your control. But if, under the influence of one of those insane delusions that have rendered this step necessary, you should kill your neighbour, you will be supposed to have acted under the

guidance of a sound reason, you will be tried, convicted, and executed like any common criminal whose understanding has never been touched by madness."

The extremely crude notions of criminal responsibility which found expression in the ruling of Mr. Justice Tracy continued to prevail undisturbed for seventy-seven years, when Mr. Erskine, afterwards Lord Erskine, introduced a new test, which was a distinct step in advance. In the year 1800 it may be remembered that a man named Hadfield was tried for shooting at the King in Drury Lane Theatre. Erskine undertook his defence. Hadfield imagined that he was in constant communication with the Almighty, that the world was coming to an end, and that he was called upon to sacrifice himself for its salvation. Not wishing to be guilty of suicide, it occurred to him that if he fired a pistol at the King his life would be taken by others, and thus the heavenly call would be obeyed. The Attorney-General, in his address to the jury on behalf of the Crown, had enunciated the old barbarous doctrine that to protect a person from criminal responsibility there must be a total deprivation of memory and understanding, when Erskine replied that if these expressions were to be taken literally, "no such madness ever existed in the world;" and in a speech which has been greatly admired, but which I have not time to quote, he declared that the existence of a delusion of which the criminal act was the "immediate and unqualified offspring" betokened a sufficient amount of insanity to exempt from punishment. He had no difficulty, of course, in showing that Hadfield's act was the direct outcome of his delusions, and, as a result of his eloquent defence, the judge stopped the prosecution and the man was acquitted. As much misconception has surrounded this question of the value of delusions as proof of insanity, and as many lawyers of the present day have not got beyond the view propounded by Erskine on the occasion to which I have just alluded, it may be well to state here that although delusions, when they can be shown to be present, do undoubtedly furnish evidence of insanity the importance of which cannot be overrated, yet it is equally true that insanity of a most dangerous type may

exist without delusions. And as to the obligation which, according to Erskine's dictum, would be imposed on the prisoner's counsel of showing that a given act of violence was the direct result of the delusion, of establishing a direct and palpable connection between them, it is one that it would be often impossible to fulfil, even when such a connection did really exist. Let me illustrate this by an example. An insane youth conceived such a passion for windmills that he was never happy or quiet except when he had one within view. To cure him of his infatuation his friends removed him to a place where there were no windmills. He had not been long in his new home before he was arrested for killing and mutilating a little girl. The connection between a fancy for windmills and such a terrible outrage was not very obvious; nevertheless it existed. The boy's object in killing the child was to ensure his removal from a place where he could find no windmills. To ask an advocate to trace the relationship between an insane act and an insane delusion is to require him to follow the reasoning of an insane mind—a task to which no man in his senses is equal.

The time had not yet come, however, for such a comparatively enlightened view as that propounded by Erskine to be accepted as a legal dogma, and in the next conspicuous trial of a similar kind there was something like a return to the time-honoured criterion. In 1812 the Prime Minister, Mr. Spencer Perceval, was killed by a madman named Bellingham, under the influence of insane delusions. Bellingham magnified his private grievances into national wrongs, and was convinced that if he could but obtain a public hearing the Government would be compelled by the country to make good his losses. In order to bring this about, and to give himself an opportunity of making a statement, he hit upon the idea of assassinating the head of the Government. He was placed upon his trial for murder, and Sir Vicary Gibbs, the Attorney-General, conducted the prosecution. In addressing the jury on behalf of the Crown, he declared that "a man may be deranged in his mind, his intellect may be insufficient for enabling him to conduct the common affairs of life, such as disposing of his property or judging

of the claims which his respective relations have upon him; and if he be so, the administration of the country will take his affairs into their management, and appoint to him trustees; but at the same time such a man is not discharged from his responsibility for criminal acts." "Upon the authority of the first sages of the country," he continued, "and upon the authority of the established law in all times, which law has never been questioned, although a man may be incapable of conducting his own affairs, he may still be answerable for his criminal acts if he possesses a mind capable of distinguishing between right and wrong." It will be observed that this dogma, in which the presiding judge, Lord Mansfield, concurred (with the result that the poor madman was executed), was a little less monstrous than that of Judge Tracy. At the same time it erects a standard of insanity which it is impossible for anyone to reach, and which is tantamount to a refusal to accept insanity under any circumstances as an excuse for crime. For some time to come, however, this test took its place in English law among those by which the degree of insanity necessary to exempt from punishment had to be measured.

I pass on now to the well-known case of McNaghten, who was tried in 1843 for the murder of Mr. Drummond in mistake for Sir Robert Peel, from whom he imagined himself to have received an injury. The prisoner was defended by the late Lord Chief Justice Cockburn, and was acquitted on the ground of insanity. A cry of indignation arose throughout the country, and the House of Lords took the opportunity of requesting from the judges an authoritative exposition of the law concerning the plea of insanity in criminal cases. A series of questions was propounded to them, and their replies to these questions have formed, from that time to this, the basis upon which our judges have directed the jury whenever the plea of insanity has been set up. The answers need not be quoted at length; a single passage will suffice to indicate the purport of the whole document. In reply to the second and third questions, the judges state that, in their opinion, "to establish a defence on the ground of insanity it must be clearly proved that at the time of committing the act the party

accused was labouring under such a defect of reason from disease of the mind as not to know the nature and quality of the act he was doing, or, if he did know it, that he did not know he was doing what was wrong." Thus was formulated the test which, although it never found its way into an Act of Parliament, has been treated ever since the year 1843 as though it were the law of the land. Just as the test propounded by Sir Vicary Gibbs was an advance upon that of Mr. Justice Tracy, so again this last authoritative exposition of the law imposed a test which marked a further advance in the direction of humanity and common sense. The test of Sir Vicary Gibbs was the power of distinguishing between right and wrong in the abstract; the test laid down by the judges was the power of distinguishing between right and wrong in reference to the particular act with which the accused is charged. The former constitutes a criterion which practically exempts no one; the latter, on the contrary, does every now and then afford a loophole for escape. Notwithstanding, however, that in this respect the more recently propounded test is distinctly in advance of its predecessors, I think I shall be able to show that it is still far from meeting the requirements of the case, either theoretically or practically; in other words, that it is out of harmony with our present knowledge of mental disease, and that the results of its practical application are in the highest degree unsatisfactory.

The mental functions of the brain may be described as threefold—intellectual, emotional, and volitional. No one can be said to be of sound mind unless all these functions are healthily performed. The legal test of insanity is simply a test of knowledge. It formulates that popular but erroneous idea of mind which makes it the equivalent of the intelligence, and which either ignores the emotions and the will, or, accepting the poetical physiology of Scripture, regards them as functions of the heart, the bowels, and the "reins." If it were a fact that when the mind is disordered, the intellectual faculty is usually the only one that suffers, the unscientific character of the test might be allowed to pass unchallenged. But it is not so. On the contrary, it is by no means unusual to find the disorder of

the emotions and the will out of all proportion greater than the disorder of the intellect, and this is especially the case in regard to those victims of insanity who are most likely to bring themselves within reach of the criminal law. It is a common experience in lunatic asylums to find that the very persons who are most dangerous to themselves and those about them are the most intelligent inmates in the institution. To apply, therefore, a mere intellectual test to such persons—to discharge, let us say, from an asylum, those who gave no evidence of intellectual deficiency or disorder, would be to let loose upon society a number of persons afflicted with the most dangerous of all forms of lunacy. The practical result of disregarding the faculty of volition is that a person may be, and often is, pronounced to be legally responsible for an act which he had no power to control, and is punished for it accordingly.

That I may not be accused of presenting a purely medical view of the subject, I will quote some observations of Sir James Stephen on this point. "No doubt," he says, "there are cases in which madness interferes with the power of self-control, and so leaves the sufferer at the mercy of any temptation to which he may be exposed; and if this be shown to be the case, I think the sufferer ought to be excused. . . . I do not think," he continues, "that it is expedient that a person unable to control his conduct should be subject to legal punishment. The fear of punishment can never prevent a man from contracting disease of the brain, or prevent that disease from weakening his power of controlling his own actions. . . . To threaten such a man with punishment is like threatening to punish a man for not lifting a weight which he cannot move."

In the year 1874 Sir James Stephen himself made an effort to improve the law relating to the plea of insanity, in a bill which was introduced into the House of Commons by Mr. Russell Gurney, and was entitled "A Bill to amend the Law of Homicide." In that bill it was provided that homicide should not be deemed criminal if, at the time of committing the act, the accused person was prevented by any disease affecting his mind (*a*) from knowing the nature of the act; (*b*) from knowing that it is forbidden

by law ; (*c*) from knowing that it is morally wrong ; (*d*) from controlling his own conduct.

The first three of these tests, it will be observed, are the same as those proposed by the judges in 1843, with this difference, that they are cleared from a certain amount of ambiguity. The judges had said that a person should not be responsible for his act if at the time of committing it he did not know that he was doing wrong. This expression was capable of two different interpretations. It might mean the knowledge that it was morally wrong, or the knowledge that it was contrary to the law, and sometimes one of these interpretations had been given to it, sometimes the other. Sir J. Stephen proposed to include them both, so that ignorance of the immorality of the act, or ignorance of its illegality, would equally excuse a person from responsibility.

The fourth test was quite new. For the first time it recognised the fact that insanity of such a nature as to render a person irresponsible might exhibit itself in a want of control over the will. And here we are brought face to face with the fiercely disputed question, whether there is or is not such a thing as irresistible impulse,—that is, whether persons apparently sane, and, at any rate, free from obvious delusion, may be impelled to insane acts by a force that they cannot control. Many eminent lawyers entirely disbelieve in such a phenomenon, and maintain that those who think otherwise have failed to discriminate between an impulse that is irresistible, and one that is simply not resisted. I cannot deny that medical witnesses have not unfrequently pressed this doctrine of irresistible impulse unduly, overlooking the fact that an insane impulse is not necessarily an irresistible one. "But," as Sir James Stephen remarks, "it is not because a man makes a foolish statement on that subject that the law is to put itself in a false position." That there are cases where the insanity reveals itself chiefly, if not solely, in acts of violence, the consequence of uncontrollable impulse, there is, unfortunately, no room for doubting.

An example of a striking kind is afforded in the case of poor Mary Lamb, the sister of the ever delightful Elia.

The sad story has been retold by Mrs. Gilchrist, how "Mary, worn out with years of nightly as well as daily attendance upon her mother, who was now wholly deprived of the use of her limbs, and harassed by a close application to needlework, to help her in which she had been obliged to take a young apprentice, was at last strained beyond the utmost pitch of physical endurance, 'worn down to a state of extreme nervous misery.'" One afternoon, having been moody and ill for a few days previously, she snatched a knife from the table in a sudden attack of frenzy, "and pursued the young apprentice round the room, when her mother interposing received a fatal stab, and died instantly." By some means or other legal proceedings were avoided, and after Mary had resided many months in a private asylum at Islington, Charles Lamb entered into a "solemn engagement that he would take his sister under his care for life," and thus obtained her release. But she suffered a relapse before the end of the year, and was subject to similar outbreaks for the rest of her life, the mental depression which preceded the attacks being always accepted as an indication that she must be at once placed under the restraint of an asylum. Probably it was by that means alone that further catastrophes were avoided.

To return to Mr. Gurney's bill. It was referred to a Select Committee of the House of Commons, and amongst the witnesses examined were Lord Bramwell and Lord Blackburn. The late Lord Chief Justice Cockburn submitted a statement in writing. Lord Bramwell, in the course of his examination, declared (somewhat ungrammatically) that "the law lays down such a definition of madness that nobody is hardly ever mad enough to be within it." "Yet," he went on to say, "it is a logical and good definition," and he added that he had no wish to see it altered.

Lord Blackburn's evidence is equally remarkable. "We cannot fail," he said, "to see that there are cases where the person is clearly not responsible, and yet knew right from wrong," and he gives an instance; yet he, too, expressed himself as satisfied with the existing law.

Lord Chief Justice Cockburn, on the other hand, strongly supported the proposed change. In his letter to the com-

mittee he says, "As the law now stands, it is only when mental disease produces incapacity to distinguish between right and wrong, that immunity from the penal consequences of crime is admitted. The present bill introduces a new element—the absence of the power of self-control. I concur most cordially in the proposed alteration of the law, having been always strongly of opinion that, as the pathology of insanity abundantly establishes, there are forms of mental disease in which, though the patient is quite aware that he is about to do wrong, the will becomes overpowered by the force of irresistible impulse. The power of self-control when destroyed or suspended by mental disease becomes, I think, an essential element of responsibility."

Mr. Gurney's bill, however, as a whole, failed to commend itself to the committee, and has never become law.

If there must be a legal definition of the precise degree of insanity which is to exempt a person from criminal responsibility, the tests that Sir James Stephen here proposed are infinitely less objectionable than those to which our judges still adhere. But I think it can be shown that insanity is too subtle a disease to be estimated either qualitatively or quantitatively by any rigidly defined tests, however clear and comprehensive. The popular notions that one man can recognise lunacy as well as another, that its recognition is merely a matter of common sense, requiring no special training or experience, and that it invariably betrays itself by definite and unmistakable symptoms, are altogether erroneous. It is only necessary to pay a visit to a lunatic asylum, and to enter into conversation with its inmates, in order to have these views dispelled. It will be found that in a lunatic asylum the raving maniac is an exception, the majority of the inmates being quiet, orderly persons, who present, so far as their outward appearance goes, little or nothing to distinguish them from other people. Probably no one visits such an institution for the first time without being puzzled to know which are the officials and which the inmates.

Like other chronic disorders, insanity is apt to come on insidiously. Its early symptoms are very often extremely slight and extremely obscure; so much so that they are

almost invariably either misinterpreted or overlooked by the sufferer's friends. A certain alteration of manner, a disposition to talk a little more or a little less than usual, an unwonted recklessness in expenditure, a tendency to be suspicious of those who have hitherto been implicitly trusted, a slight failure in business capacity; these may be all the symptoms that mark the departure from mental health, until one day the smouldering insanity betrays itself in an act of violence. Suppose that act of violence to be one that brings its perpetrator within reach of the law, the medical witness who supported the plea of insanity by recounting the premonitory symptoms just mentioned would be smiled at as an amiable but foolish and misguided visionary. Yet let us look for a moment at some other functional diseases of the nervous system,[1] and see whether, reasoning from analogy, such a course of events is not exactly what we might expect. The more common brain diseases, apoplexy and softening, are not primarily diseases of the nerve-tissue, but of the blood-vessels supplying that tissue. In apoplexy the diseased blood-vessel gives way, and the brain is injured as a consequence; in softening, the brain undergoes deterioration from a failure on the part of the diseased blood-vessels to supply it with the material necessary for its maintenance. Insanity, on the other hand, is a functional disorder of the nervous tissue itself, and therefore we must look for the analogies we seek, not amongst the more common and grosser lesions of the brain, but amongst other functional disorders of the nerve-structures themselves,—such, for example, as epilepsy and chorea.

The analogy between epilepsy and those forms of insanity which are accompanied with sudden outbursts is a very close one. An epileptic fit is due, speaking broadly, to a disorder of those portions of the highly organised nervous tissue lying on the surface of the brain, whose function it is to take the supreme direction of the movements of the voluntary muscles of the body. The outburst of maniacal fury is due to a corresponding disorder of those portions of

[1] By the words "functional diseases" I mean diseases which are not necessarily accompanied with such structural changes as are capable of being recognised after death.

the same tissue which have for their function the control of the thoughts, the emotions, and the will. The most striking feature in each of these phenomena is its suddenness. The insane impulse and the epileptic fit have both something of the nature of an explosion. The causes that have been at work in each case have been cumulative in their action, and only when the accumulated irritation has reached a certain degree of intensity has there been any, or, if any, but the very slightest outward indication of the gathering storm. The epileptic may have had one or two transient attacks of giddiness, or an occasional look of vacancy, and the madman may have exhibited one or more of those comparatively trifling alterations of character and manner which I have enumerated; but in neither of the cases I am supposing will there have been any premonitory symptoms sufficiently striking to attract the attention of persons who have had no special training or experience in such matters. The epileptic fit is a storm of muscular movement, a general convulsion of the voluntary muscles; the madman's violence is a storm of thought, emotion, and will, betraying itself in extravagant conduct; it, too, is essentially a convulsion. The analogy may be pursued further. After the epileptic fit and the phenomena that sometimes immediately follow it have subsided, the individual to all appearance returns to his normal condition, giving no indication of what he has gone through beyond perhaps one or two bruises. Similarly, after the insane act of violence, there may be an apparent return of mental soundness, such as to make it difficult, if not impossible, to discover any evidence of insanity.

After what has been said it will occasion no surprise to hear that these two kinds of storms occasionally alternate in the same individual, an outburst of insane fury or violence taking the place of an epileptic fit, and *vice versâ*. Nor will it be wondered at that the one kind of explosion may occur in the parent and the other in the offspring.

But the object I have had in view in tracing the analogy is to point out that while there are many cases of insanity where the malady is patent to the whole world, there are others, and those precisely the cases most likely to come up for trial on criminal charges, where the disease is

exceedingly difficult to recognise, even by the trained observer, and by the untrained impossible. The spectacle of an epileptic seizure taking place suddenly in an apparently healthy person is one of such every-day occurrence that it excites scarcely any notice; but if a medical witness stands up in court and suggests that an atrocious and apparently motiveless act of violence was the insane act of the apparently calm prisoner in the dock, he is in danger of being ridiculed as a theorist. That such, however, is the explanation of a certain number of acts of violence cannot be doubted, and the analogy here traced to the well-known phenomena of epilepsy may serve to bring this fact home to us, and to remind us that there is nothing in it which is out of harmony with other facts that are daily before our eyes.

Let us now look for a moment at the analogies which insanity presents with the disorder popularly known as St. Vitus's dance. Those of you who have had the opportunity of seeing cases of this kind need no description of it; but for the sake of those who have not, I may say that the prominent symptom of chorea is a series of irregular and involuntary contractions of those muscles of the body that are normally under the control of the will, giving rise to spasmodic jerkings of the limbs and grotesque contortions of the features. The disorder has been called an insanity of the muscles, and indeed it is a condition which has the closest analogy to insanity. In the one case the muscles are excited to irregular and purposeless action, in the other the ideas and emotions are affected in a very similar manner. But, for my present purpose, the most important part of the analogy is observed in connection with the earliest manifestations of these disorders. St. Vitus's dance is chiefly a disorder of children; the slight twitchings that mark its onset are almost always mistaken for naughty tricks, and the child, instead of being treated as a subject of disease, is visited with reproof and punishment. The child's features are slightly contorted; it is thought to be making faces. The muscles of its hands and arms being no longer in complete subjection to the will, it lets things fall; it is thereupon scolded for carelessness. This goes on for

a time, until the development of the disorder at length forces home the conviction that the grimaces and twitchings are due not to naughtiness, but to disease. If this mistake is so constantly made where the symptoms are as evident to the senses as any symptoms can possibly be, how can it be wondered at that the earliest signs of mental aberration should be difficult of recognition and almost invariably misunderstood,—should, in fact, be attributed to the innate depravity of human nature, and be punished accordingly?

I pass on to show how inadequate the tests are when they come to be applied to actual cases. Take, for example, the case of Hadfield, the man who shot at George III. It is evident that he knew the act he was about to commit was murder, and that he would thereby render himself liable to the penalty of death, for his express object was to do something which would result in the sacrifice of his own life, a sacrifice which he believed to be necessary for the salvation of the world. Had the judges' formulæ been laid before the jury in that case—had they been told that they must find the prisoner guilty provided they were satisfied that he knew the nature and quality of the act he was committing, and knew that in committing it he was doing wrong: and had they done as they were told, Hadfield must have been hanged as a sane criminal.

Another instance will be found in the evidence of Lord Blackburn before the Select Commitee of the House of Commons in 1874. The case was that of a poor woman who was tried for killing a girl of fifteen. The prisoner's insanity was proved beyond a doubt; yet she knew the nature and quality of her act, and knew that what she had done was wrong. The prescribed tests were here so manifestly inapplicable that the judge declined to place them before the jury, knowing that if he did they would, to use his own expression, take the bit in their own teeth. He told them there were exceptional cases, and they thereupon brought in a verdict of insanity.

But instances of this kind, where the judge, as it were, takes the law into his own hands, or boldly overrides it, are very rare. Under ordinary circumstances, the result of the trial is by no means so satisfactory as in the case alluded to

by Lord Blackburn. Let me mention, by way of illustrating the more usual course of events, two trials that occurred within a very short time of each other in the year 1883. The first was that of a man named William Gouldstone, who after exhibiting symptoms of intense mental depression for several days, deliberately killed his five children. The second was that of James Cole, who, while labouring under a delusion that his wife had hidden people under the floor and in the cupboard to try to poison him, took up his unoffending child of three and a half years from its cradle and killed it by knocking its head violently against the wall. In the one case several of the members of the family were proved to be insane, and in the other there was evidence of a strong family predisposition to epilepsy, which is first cousin to insanity. The men themselves were both undoubtedly insane. The jury, however, were told in both instances that the only question for them was whether the prisoner knew the nature and quality of the act he was committing, and knew that it was wrong. As, on their own showing, both of them intended to kill their children, and knew that they had thereby incurred the penalty of death, the jury, following the judge's direction, had no alternative but to reject the plea of insanity, and each of the men was accordingly sentenced to be hanged without any hope of mercy being held out to him. Fortunately, owing to the strong representations of some medical men and of the medical press, the Home Secretary was induced to authorise an examination by two competent physicians, the result of their report being, of course, that, instead of being sent to the scaffold, the men were committed to the safe keeping of a lunatic asylum.

Surely, even if there were no other consideration involved, the fact that sentence of death is so repeatedly reversed in these cases by the Home Secretary, after a secret and informal inquiry, is alone sufficient to condemn the present state of things. Had there been time I might have put this part of my case more strongly. I might, for instance, have referred to cases where the tests had been applied and the plea of insanity rejected, and where, no appeal having been made to the Home Secretary, the poor lunatic has been hanged with-

out further inquiry. One such case in which I happened myself to be engaged as a witness I am not likely ever to forget. No one, I imagine, could have heard the clear evidence that was produced at the trial on that occasion as to the man's insanity, and then have read how, when the moment for his execution arrived, the poor fellow mounted the scaffold with the surprised look of a man awaking from a dream, utterly failing to comprehend the meaning of it all, without being shocked at the scandalous inhumanity of the proceeding, and without feeling that he would be guilty of moral cowardice if, when occasion offered, he did not raise his voice against the system that sanctioned it.

But I must hasten to indicate, as briefly as possible, the changes which, it seems to me, would help to remedy the evils to which I have called attention.

We have seen how the legal tests of insanity underwent alteration from time to time, in accordance with the growing tendency to a more humane regard for the unfortunate victims of that disease. We have also seen that no change has been made in them since 1843, now upwards of fifty years ago, although the rules that were then formulated are now so far behind the time as to be discreditable. A further change has become imperative. What direction ought that change to take?

In the first place the existing tests, which are mere knowledge tests, should be entirely abolished, the question of responsibility depending not upon a person's knowledge, but upon his capacity for acting upon that knowledge; that is, upon his power of self-control.

Secondly, in any future legislation on this subject, provision should be made for the case of idiots and imbeciles, to whom no reference is made in the existing rules, but who certainly ought not to be prevented from pleading insanity because their insanity happens to be due to defect and not to disease.

In the next place it is well worth considering whether the present form of verdict might not be altered with advantage. Where the only defence is that of insanity, the crime itself being admitted or proved, a jury has at present but two courses before it, viz. (1) to reject the plea and

pronounce the prisoner guilty, when he will be punished as a sane criminal; or (2) to accept the plea and pronounce him not guilty on the ground of insanity, when he will be consigned to a criminal lunatic asylum during Her Majesty's pleasure, which generally means for life. Not to mention the absurdity of returning a verdict of not guilty when the guilt is proved, this method, by recognising no difference between one insane criminal and another, or between an insane person who has committed a serious crime, and one whose offence is comparatively trifling, has the effect of preventing the plea of insanity from being urged as often as it ought to be. There is only one punishment, that of death, which is more dreaded by rational beings than a lifelong incarceration in a criminal lunatic asylum; hence, in the case of all crimes except that of murder, a prisoner's counsel almost invariably prefers that his client should run the risk of the ordinary legal punishment for his offence, rather than that by pleading insanity he should expose himself to a worse fate. It seems to me that in every case where the question of a prisoner's insanity arises the court should institute two separate inquiries, and the jury return two separate verdicts.

The first inquiry should be whether the prisoner committed the crime with which he is charged. In case of the verdict on this inquiry being guilty, a second inquiry should take place as to the prisoner's mental condition at the time the act was committed. Supposing the insanity to be established, a discretionary power should rest with the judge, either to inflict a modified punishment, or to consign at once to an asylum. It cannot be doubted that there are varying degrees of responsibility in insane criminals, as there are certainly varying degrees in the character of the crimes perpetrated by them, and the only way to ensure justice being done is to take into account the whole of the circumstances in each case, and deal with it accordingly.

Sir Herbert Stephen, in a recent letter to the 'Times,' has described exceedingly tersely the respective functions of the judge, the jury, and the medical witnesses in regard to this question of legal responsibility. It is, he says, not the province of the medical witness to express any opinion as to

the legal responsibility of the accused. The question for him is whether A B is insane, and if so to what extent. It is for the judge to say what sort of insane persons are irresponsible, and finally it rests with the jury to decide whether A B, the accused, comes within that category.

As the jury, in arriving at a conclusion with reference to a prisoner's insanity, must necessarily be guided almost entirely by the medical evidence, it is important that that evidence should invariably be the best that is obtainable.

My last suggestion, therefore, is that in every case where the defence is to be that of insanity, two independent physicians, appointed by the State, should be required to institute an inquiry, *before* the trial, into the state of mind of the accused. At present, unless the prisoner or his friends are able to engage the services of a solicitor, and to pay for the evidence of experts, the defence, generally undertaken at the request of the judge by some junior member of the bar at the moment of trial, is conducted under every conceivable disadvantage, and the plea is either entirely unsupported by medical evidence, or is supported merely by the testimony of the medical men who happen to have been brought into contact with the accused, and who may have had no special experience in insanity, or in the art of giving evidence.

Such an inquiry as is here suggested is now frequently instituted, at the instance of the Home Secretary, *after* trial and sentence ; why should not the same machinery be set in motion *before* the trial ? Not only would such a proceeding be more regular, but it would have this great advantage, that the experts would give their evidence upon oath in open court, and that an opportunity would be afforded for cross-examination.

The principle which it is here suggested should be adopted in cases of alleged insanity has already been acted upon in cases of alleged poisoning. Two distinguished toxicologists have been appointed analysts to the Home Office, their duty being to conduct the necessary analyses in cases of suspected poisoning, and to give evidence as to the result of their inquiry at the trial of the accused. It would not be difficult to find two physicians of acknowledged eminence as authorities on insanity, competent to act in the capacity of

experts, who would possess the confidence both of the medical profession and of the public.

It is now nearly ten years since I made these suggestions. I claimed no originality for them then, and I claim none now. Most of them have no doubt been made before in one form or another. Dr. Weatherley's proposal in the paper already alluded to was a somewhat different one. He proposed that no person should be held legally responsible for a criminal act if he could be proved to be of sufficiently unsound mind to be certifiable. I will not detain you by discussing the respective merits of these suggestions; my chief aim to-night has been to place before you, as concisely as I could, a general survey of this important subject, and especially those medical aspects of it which, in the course of my own reading and experience, have appeared to me most to demand consideration.

In bringing my remarks to a conclusion I make no apology for quoting and appropriating the words with which the late Dr. Guy, one of our foremost medical jurists, closes his latest utterance on this question. "If," he says (in the last chapter of his 'Factors of the Unsound Mind') "I seem to have handled a great subject unworthily, I plead in mitigation of my offence its immense extent and admitted difficulty. If I have run counter to any man's preconceived opinions, let me assure him that it is not with arrogance or pleasure that I differ from him. To him I desire to attribute that which I claim for myself—a paramount love of truth, and a public spirit which will not suffer me to forget that while I am a member of a noble profession, I am also a citizen of a great State, a State which if in some respects she claims to *teach the nations how to live,* in others shows herself not too proud to learn; a State that has no higher title to respect than that which she derives from her humanity; a State that would suffer indelible disgrace if, ceasing to regard the madman as an object of profound compassion, she should come to treat him as a thing only calculated to excite feelings of intolerance and disgust."

TWO CASES

OF

SEVERE INJURY TO THE HEAD,

IN EACH OF WHICH UNUSUAL CONDITIONS WERE PRESENT.

By WILLIAM HENRY BATTLE, F.R.C.S.

The treatment of bullet wounds of the skull has undergone a change during recent years, and there is far less hesitation in dealing with such cases now than obtained only a few years back. In all patients where the condition resulting from the injury is not evidently too desperate to permit of it, surgical interference should be the rule, with the object of cleansing the wound or wounds, searching for the foreign body, and its extraction where possible, removing fragments of bone, and providing for drainage. In all cases the important question has to be answered, has the bullet penetrated the skull? And it is not possible to answer satisfactorily without a careful examination of the wound. I have twice seen attempts to commit suicide with revolvers prove unsuccessful and the bullets arrested by the bone, although, as the skin was blackened with the powder, and the amount of shock was very considerable, it was thought that the bullet had penetrated. In one of these the bullet

was found flattened out on the frontal bone, yet the bone appeared uninjured.[1] The suspense of the patient and the great anxiety of the friends can only be relieved by exploration, preferably under anæsthetic, when every opportunity is also afforded for thorough cleansing of the part, excision of torn or bruised skin, and the insertion of sutures.[2] If it is found on examination that the bullet has penetrated, the opening in the skull should be enlarged with the trephine or Hoffman's forceps, and search made within the brain for it, as there is no doubt that although patients recover with bullets in their brain, such are a source of danger occasionally, almost always leading to abscess—or serious mental disturbance in later life.

Hahn[3] has tabulated a series of reported cases of foreign bodies in the brain, 423 in number, and of these 199 died and 224 recovered. Of the 199 that died, the foreign body was removed in 48 cases; in the remaining 151 the foreign body was left in the brain. A larger mortality percentage is found in those cases where operative interference was not resorted to, as the following figures show :—Died 199; body removed in 48, or 24·2 per cent.; body not removed in 151, or 75·8 per cent. Recovered 224; body removed in 113, or 50·4 per cent.; body not removed in 111, or 49·6 per cent. In the 224 cases of recovery the figures as to removing the body are about equal, showing slightly in favour of removing the body. The mortality from a foreign body in the anterior cerebrum is 38·5 per cent.; in the middle cerebrum 41·5 per cent.; in the posterior cerebrum 43 per cent. No case of foreign body in the cerebellum recovered. Of the 286 cases of balls in the brain here reported, 143 recovered and an equal number died, making a mortality of 50 per cent.

Of those that recovered, the ball was removed in 56, or 39·1 per cent. It was not removed in 87, or 60·9 per cent. Of those that died, the ball was removed in 112, or 78·3 per cent.; it was not removed in 31, or 21·7 per cent. Of the 168 cases operated upon, 112 died; 56 recovered, or a mortality of 66⅔ per cent. Of the 118 not operated upon, 87 recovered,

[1] 'Trans. Path. Soc.,' vol. xxxvii, p. 520.

[2] "Compound Fracture of Vault," 'St. Thomas's Hospital Reports,' 1892.

[3] Sajous, 'Annual of the Universal Medical Sciences,' 1893, vol. iii, A. 32.

a mortality of 26·3 per cent. But since antiseptic surgery 60 cases have been reported with 24 deaths, or 40 per cent., and 36 recoveries, or 60 per cent. Of these 60 cases the ball was removed in 24 ; 20 recovered, 4 died, or a mortality of $16\frac{2}{3}$ per cent. In 36 the ball was not removed ; 20 died, 16 recovered, a mortality of $59\frac{5}{9}$ per cent.

There are noted 57 cases of cerebral abscess following the entrance of a foreign body to the brain ; of these 34 died, 3 recovered, a mortality of 91 per cent.

Nearly all of these cases of abscess were from injury prior to the introduction of antisepsis in surgery. In those cases reported since the introduction of antisepsis there have been noted but few with cerebral abscess, while prior to it they were very common.

These statistics are interesting, but in the class of case under consideration statistics are of very doubtful value. If the bullet strikes an inch to one side or the other of any given point, if it varies in size, in velocity, or in direction—and these things do vary every time,—it is not possible to group all injuries of a certain region into one column, and say the prognosis is so-and-so. There are far too many facts to be considered for any hard and fast rules to be laid down, and the surgeon will be most successful who in any case before him treats his patient judiciously and on recognised surgical principles.

In the case described below, the bullet had passed directly through the skull and brain, and it was not difficult to define the track with some accuracy, from the point of entrance to that of exit. There was no suppuration in the wound or tendency to hernia cerebri, and therefore it appeared unnecessary to interfere, more especially as the lower wound was so offensive. Antiseptic applications to the wound in the vertex, and frequent cleansing of the wound in the mouth, with other treatment as described in the case, were carried out. It was not expected that the man would recover, but, considering the size of the bullet and the position and extent of the injured area, it is remarkable that life was prolonged for such a period of time as eighteen days.

There was nothing remarkable in the appearance of the wound of exit, either in bone or scalp ; it was as usual in

such injuries when made from within outwards. The discovery of the symmetrical features on both sides of the opening in the skull is, however, interesting and worthy of notice, as, so far as I am aware, the presence of such fractures has not been previously described. It is difficult to account for the mode of causation of these fractures; were they due to the violent lifting force of the bullet in its passage through the bone? or to the arrest of a wave of strong vibration started by the blow and culminating at the point where the solution of continuity occurred, owing to some peculiarity in the shape or structure of the bones constituting the vault around the part struck?

Case 1. *Remarkable duration of life after severe bullet wound of the brain; accessory concentric fractures of vault.* —M. H. S—, æt. 43, was admitted into Albert Small Ward (by kind permission of Mr. MacKellar) under my care on the 10th March, 1894.

About ten days before admission he had shot himself through the head with a full-sized revolver, on account of some temporary financial difficulties and family troubles. The muzzle of the revolver had been placed in his mouth and discharged. He has been in an unconscious condition since the injury, under the care of Mr. G. A. Hammerton, F.R.C.S., who asked me to see him.

There was a hole in the posterior part of the hard palate to the right of the middle line, just admitting the tip of the little finger; it was dry, rounded, and the parts near stained with powder. His breath was very offensive, and tongue brown and dry.

On the vertex of the head there was a somewhat irregular scalp wound, with torn edges, over a large hole in the bone. This was situated near the bregma, about an inch to the right of the middle line. More bone had been removed from the outer than from the inner table, and the opening was fairly rounded in outline. The hair had been removed from around this wound, but was growing again. The dura mater was torn, but there was no hernia cerebri, and it was not considered advisable to probe the wound. The discharge was but slight and caked. The wound was not offensive.

The patient lay in a semi-comatose condition, with occasional restless movements of his right arm and leg, but there was loss of power, not absolute, in the left arm and leg. When strongly shouted at he appeared to rouse, but could in no way express his wishes if he had any. The right pupil was somewhat the larger, and did not act to light. The bowels were acting. He occasionally put his hand to his head and moaned.

Mr. J. B. Lawford kindly examined the eyes on the 12th, and reported "Right pupil fixed, but not wide; it is larger than the left. Reaction to light, both direct and consentaneous, is lost. Left pupil active to light. Ophthalmoscopic examination :—Right optic disc normal. Left optic disc slightly congested, no swelling. The right pupil is not as wide as is usual, from paralysis of the third nerve.

There is but little to report in the further progress of the case. He occasionally required the use of a catheter for the relief of retention, and sometimes it was necessary to give a purgative or enema for the relief of constipation. The temperature from the 10th March to the 18th, on the evening of which day he died, was usually low in the morning and high in the evening.

March 10, midnight..... 100·8°		March 14, midnight..... 103·6°	
A.M.	P.M.	A.M.	P.M.
11. 98·4°	99·2°	15. 101°	102·4°
12. 95·2°	102·6°	16. 100·6°	102°
13. 98·4°	100·4°	17. 101·4°	101·6°
14. 98·6°	100·6°	18. 101·4°	103·4°

The coma deepened during the last day or two of life, the patient could not be roused. His mouth was more foul, very dry, and his breath extremely offensive. The paralysis of left side became complete.

I am indebted to Dr. Mackenzie for the account of the post-mortem examination made on the 19th March, from which this abstract is taken.

The lungs were œdematous, the apices were scarred, and in the neighbourhood were fibrous tubercles. Lower down in the right lung there was a small superficial caseous nodule. There was a calcareous bronchial gland at the bifurcation of the trachea.

After the removal of the scalp the following was found to be the condition of the skull :—(A) There was a circular hole near the vertex, but slightly to the right of the middle line. This was about half an inch in diameter. It was considerably larger on the outer surface than on the inner, thus having a conical appearance. (B) There was a longitudinal fracture passing forwards and backwards from the perforation. There was also a short transverse fracture passing to the right. (C) There was a longitudinal fracture on each side, starting at the parieto-temporal suture, but soon leaving it, and running backwards in the parietal bone and partly in the occipital. Through the perforation the brain substance slightly protruded. On removal of the calvaria there was found to be an effusion of blood between the bone and the dura mater, on the right side posterior to the perforation. The blood was firm and partly decolourised, and formed a layer of no great thickness, some two inches in diameter.

On removal of the brain the following condition was found :—The right olfactory lobe was divided. The frontal lobe on the under surface just in front of the temporo-sphenoidal, close to the middle line, was the spot where the bullet had entered the brain, and here there was a circular area of softening. The other extremity of the bullet track, corresponding to the hole in the skull, was at the posterior extremity of the superior frontal convolution. The surface of the brain in the neighbourhood of the latter was discoloured, and there was some local meningitis here. In the apex of the right orbital roof there was a ragged hole, a piece of bone being absent which had probably been carried along with the bullet. The right optic nerve was found to be divided in this situation. The third nerve was dissected, and except that there was slight effusion of blood in its sheath it was quite normal. There was a large hole in the floor of the orbit leading into the nasal cavity and down into the mouth. There was a good deal of suppuration about the wound in the nose. Some fragments of lead were found in the orbit near the wound.

The course of events in the following case is unusual, and the complication of intra-cranial abscess very rare. The question for solution is interesting and difficult to answer.

It is—What was the cause of the abscess in the brain? Septic mischief spreading from the ear or from the vault? for we may take it for granted that it was of septic origin, for both the traumatic abscess and the one secondary to otitis media are of that nature.

I think that it was due to septic infection from the fracture into the middle ear. 1. As the external auditory canal showed no signs of suppuration, and there was no reason to suspect disease of the middle ear; no special steps were taken to cleanse it at the time of the operation. 2. There was the discharge from the ear of very offensive, thick, pultaceous material. 3. Extension of inflammation from the fracture in the base, as evidenced by the onset of the facial paralysis on the same side. 4. The situation of the abscess; it was in the usual position of abscess due to otitis media, and was not directly under the fracture of the vault, where, indeed, the evidence of septic infection, although present, was slight.

Against this view is the fact that cerebral abscess, as a consequence of the spread of septic inflammation from the ear after a fracture of the base of the skull, is almost unknown; I was unable to find any example of it when collecting material for my lectures on head injuries for the Royal College of Surgeons. Patients who had previously suffered from otitis media sometimes developed suppuration about the fracture and within the cranium, but it was outside the dura mater, or septic meningitis, but never intracranial abscess. The possibility of such must not, however, be denied.

The circumstances under which the abscess formed are interesting and unusual, for, owing to the large opening in the skull, no great amount of tension was present; and had it not been for the gradual implication of the motor centres, we should have had no reason for thinking that suppuration existed, and the symptoms which were present would have been put down to the presence of a slowly spreading encephalitis, as indeed they were when the second exploration failed to discover pus where it had been previously found.

The injuries which the man received were not incapable of repair, and had the possibility of the existence of the

large abscess been suggested to my mind, and the necessary steps taken to evacuate it, the patient might have recovered. The case is therefore of some clinical importance.

Case 2. *Compound fractures of the vault and base of the skull; trephining and removal of fragments; facial paralysis; temporo-sphenoidal abscess; exploration of brain; death on the twenty-fourth day.*—A groom, æt. 35, was admitted to Albert Ward on the 25th August, 1894, suffering from an injury to the head.

About an hour before admission the patient, a strong-looking man, was grooming a horse, when it kicked him on the left side of the head, knocking him down senseless. In falling he struck his forehead against some flagstones, was picked up unconscious, but on admission could speak, although he did not seem to understand what was said to him. He could move his arms and legs, but was unable to stand.

A large ragged cut was found on the left side of the head about 1½ inches long, situated above the ear; bare bone was felt and seen. A fracture with depression of bone was also felt. There was considerable hæmorrhage, and cerebro-spinal fluid was issuing from the wound. A second wound was found above the right eye on the forehead, and beneath this was a fissured fracture of the frontal bone. Blood was flowing from the left ear and left nostril, a considerable quantity being lost on his way to the hospital. As soon after admission as possible the patient was anæsthetised, the wound above the ear enlarged forwards and backwards, and a large gutter-shaped depression exposed, with some comminution of fragments; it was not possible to raise this depressed area until an opening had been made for the elevator by removal of bone with a small trephine just behind the posterior margin. When the principal piece had been elevated some trouble was experienced in the arrest of the hæmorrhage; this came through an opening in the dura mater, and it was necessary to remove bone with Hoffman's forceps before the bleeding point, which was in the edge of the wound, could be secured. The usual precautions were taken with regard to cleansing the wound, and perchloride

of mercury solutions used. The edges of the wound, which were soiled with in-ground dirt, were cut off with scissors. Fine silk was used for sutures, and a small drainage-tube put in. The frontal wound was washed out and closed without drainage.

August 26th.—Patient slept a little, and was fairly quiet; he vomited some altered blood, and the bowels acted once. Pulse 106.

28th.—He has been quite quiet, has taken his food, and seems to understand what is said to him, but his speech is much impaired. Pulse 70. Left facial paralysis.

30th.—During the night the patient had three fits, and one this morning which lasted for about half a minute. The fits had the same character, commencing with twitching of the mouth and face on the right side, and occasionally the right arm was violently moved, so that the nurse had to use all her strength to hold the limb. Occasionally the left arm was affected, but not so much. Once the movements extended to the right leg. There were no involuntary evacuations. Pulse 48.

31st.—Four fits of similar character. Temp. 102·4°; pulse 60. The wound on the side of the head is suppurating, so all the sutures were removed.

On September 1st there were four fits, but none on the 2nd, on which date he is noted to have been more irritable and lying on his right side. His speech was very uncertain, and he was nearly deaf; his power of swallowing was impaired, so that he was fed through a nasal tube. There was no optic neuritis. Pulse 60. Slight alternating squint was noticed. There is a discharge of offensive pus from the ear which has appeared this morning. About three days after admission he had a dirty brown pultaceous material coming from the ear, which was very offensive; the ear was syringed with Lot. Boracis, and was apparently quite satisfactory. He was unconscious and without corneal reflex. On the 3rd the state was much the same; pulse 70. Passing evacuations in bed. The state resembled that of deep sleep without stertor, from which it was not possible to rouse him. He moved the left arm to the mouth when being fed, and pushed the bedclothes down. At 6.30 p.m. I found him in

this condition, and decided to explore the brain for abscess, Mr. Makins, who kindly saw the man in consultation with me, agreeing as to the advisability of this course, and as to the probable site of the abscess. The right arm was flaccid, but moved when the scalp was shaved; the left arm moved without apparent reason, the movements being those of alternate flexion and extension. The wound on the left side of the head was opened up, and a small hernia of the brain found through the opening in the dura mater. A fine needle having been introduced in a direction upwards, forwards, and inwards to a depth of about 1½ inches, a drachm and a half of odourless pus was drawn off. A pair of artery forceps passed along this track and opened; a small quantity more was evacuated, the place washed out with 1 in 5000 perchloride, and a small drainage-tube introduced. The ear was thoroughly syringed. At 10 p.m. he was lying quite quiet with the exception of slight twitching of the left hand. Temp. 99·8°; pulse 72. The left knee-jerk was excessive, the right very slightly marked. The pupils reacted to light—the left very little, the right fairly well. There is no optic neuritis.

September 6th.—Some corneal reflex in right eye, none in left. Considerable quantity of discharge from left ear.

7th.—The temperature had risen in the afternoon to 102·8°. There had been no discharge from the tube in the brain, so further exploration was made but without success, and a metal tube inserted. There has been no vomiting, but a collection of mucus in the pharynx causes some difficulty in getting rid of it. At 9 p.m. he was sweating profusely, and the face appeared rather dusky.

9th.—Colour rather improved, and respiration easier. Pulse 80; temp. 98° (last night 102°); sweats profusely.

10th.—Moved right hand and arm during the day; coughs quite naturally. Usually lies quietly on his back, breathing regularly with slight stertor.

12th.—No discharge from ear, a good deal from scalp wound. There was little change in his condition until the 16th, when the temperature rose and his breathing became more laboured, and at twelve o'clock temp. reached 105·2°; pulse 178; resp. 44. Brandy and quinine were

administered, and the temperature fell to 102·6° at 12.40 p.m., but at 7 p.m. it was 107·2°, wet pack; 8 p.m. 105·4°; 9 p.m. 106·4°; 9.30, 101·8°, tepid sponging; 10, 103·8°; 10.30, 106·6°, tepid sponging; 11, 104·2°; 11.30, 105·4°, tepid sponging; 12, 105·8°; 12.30, 103·4°, iced water sponging; 12.35, 105° after death; 12.45, 106·2°.

The abstract of the post-mortem examination is from the account of Dr. W. R. Box, medical registrar.

There had been a large fracture of the outer table in the frontal region. Two inches vertically above the left external meatus a gaping wound three inches long, and at the bottom of this a hernia cerebri, a depressed fracture having been elevated, and bone removed with cutting forceps. On removing the skull-cap and incising the dura mater a distinct bulging was noticeable in the left temporo-sphenoidal lobe. The cerebral vessels were all distended with fluid, and in the substance of the left temporo-sphenoidal lobe corresponding to the swelling above mentioned was a large deep-seated abscess, communicating by a track with the hernia cerebri. The abscess cavity was about the size of a walnut, and extended forwards by a narrow prolongation. It contained a little pus, some having escaped during removal. The surrounding brain substance was diffluent, and the dura thickened. A forward fracture extended from the above opening through the roof of the tympanum to the base of the posterior clinoid process: the middle ear on this side was examined and found quite free from old disease. The facial nerve, when followed through the bone, was found very soft. The sinuses were normal. No basal meningitis. Both lungs were extensively studded with broncho-pneumonic patches about the size of peas, but no abscesses were found. The spleen was soft and friable. All the other viscera were healthy. The abscess abutted on the lower extremity of the left ascending frontal convolution, and extended forwards as far as the middle of the lenticular nucleus in the external capsule.

Note.—The skull-cap in Case 1 is preserved in the Museum of St. Thomas's Hospital Medical School.

A CASE

OF

ACUTE INTUSSUSCEPTION OF UNUSUAL ORIGIN.

By E. C. STABB, F.R.C.S.

J. A—, æt. 32, a robust and well-made labouring man, was admitted into St. Thomas's Hospital under the care of Dr. Ord on March 5th, 1894. He had never suffered from any intestinal trouble till the morning of admission, when he was suddenly seized with acute pain in the lower abdomen, accompanied by violent vomiting. This occurred while at work, and about an hour after breakfast; the pain increasing, he came to hospital an hour after the onset, vomiting several times on the way. The pain was paroxysmal, causing him to writhe and double up.

When admitted the abdomen was extremely rigid and tender, but no tumour could be detected. Tinct. Opii ℥xv failed to relieve the symptoms, as did also a twice repeated hypodermic injection of morphia, gr. ¼. The abdominal muscles, however, relaxed somewhat, and under this more favorable condition it was possible to distinguish a rounded and moveable tumour situated in the lower abdominal region, and extending into the pelvis. *Per rectum,* an indefinite mass could be made out continuous with that felt in the abdomen,

but there was no discharge of blood or mucus, and a simple enema was returned almost unstained.

It being now evident that surgical interference was necessary, the patient was etherised, and a median laparotomy performed. The mass previously felt was with some difficulty brought outside the abdomen, and proved to be an intussusception of the small bowel, quite black in colour but with polished surface, and measuring in this unreduced condition some 8 inches in length ; a rather less distance than this intervening between its lower end and the cæcum. Reduction was effected without much difficulty by slight traction upon the entering tube, combined with gentle compression of the tumour, the intussusception being evidently of recent occurrence. On examination of the reduced bowel a small irregular pedunculated tumour could be felt within its lumen, at a point some 30 inches from the cæcum, the site of its attachment being opposite the mesentery, and indicated by a small funnel-shaped depression in the peritoneum, which would not, however, admit a probe for any distance. The tumour was removed, together with an elliptical-shaped portion of the wall of the bowel to which the pedicle was attached. At the same time a quantity of dark blood escaped from the lumen.

The incision was closed by a double row of Lembert's sutures of fine silk. In appearance the tumour closely resembled three acorns joined together in the greater part of their extent, and narrowing at one extremity to form a common pedicle of attachment. The free extremities of the two larger lobes were devoid of mucous membrane, the surface of the tumour here being somewhat tuberculated, and very dark in colour.

a a a. Three lobes of tumour. *b.* Common pedicle of attachment. *c c.* Ulcerated surfaces.

The whole extent of bowel involved in the intussusception measured nearly 3 feet; it was black in colour, but polished and resilient; therefore it was considered safe to return it into the abdominal cavity, and close the abdominal wound, which was accordingly done. The symptoms were immediately relieved by the operation, and all went as well as could be desired for nine days, during which time the bowels acted naturally several times, the first evacuation containing a large quantity of black blood. The patient had commenced to take fish and other light solids with great relish. The abdomen was flat and natural, the wound having healed by first intention.

On the ninth day, however, patient's temperature, which had previously been normal, rose suddenly to 102° without any apparent cause, and on the next day to 105° with a rigor.

On examining the abdomen a small area of dulness could be detected just to the left of the middle line and below the umbilicus, over which spot there was tenderness on pressure, and from the absence of any other cause for the symptoms it was thought right to explore it. Under ether an incision was made over the dull spot down to the rectus muscle, and its fibres separated in the longitudinal direction. A small cavity the size of a walnut, containing fluid fæcal matter, was opened, and after sponging it out a small slough was seen in the bottom of the cavity protruding from an aperture, evidently in the intestinal wall. On gently pulling upon this slough it came away, followed by a fæcal discharge; consequently the wound was in part left open, and a fæcal fistula resulted. When floated in water the slough proved to be of mucous membrane, and to involve the whole circumference of the bowel at several places, its length being 8 inches, and greatest breadth $2\frac{1}{4}$ inches. The specimen is in the museum of St. Thomas's Hospital (1107 E).

For the next nine days patient's condition was most satisfactory, but there was a more or less continuous fæcal discharge from the wound. On the tenth day after this second operation patient complained of faintness, and his dressings were found soaked with bright blood, the quantity being estimated at about a pint, bleeding having taken place within

the bowel and escaped through the abdominal fistula. Hæmorrhage having ceased apparently, nothing was done beyond syringing out the bowel with cold water, and the administration of an astringent by the mouth. By the next day patient had recovered somewhat, when a second and even more severe hæmorrhage took place, soaking through the dressings into the bed. The patient being blanched and almost pulseless, it was evident that no active interference could be borne in that condition. In the hope, however, than an intra-venous saline injection might revive him sufficiently to stand an exploration, he was removed to the operating theatre, and five pints of normal saline solution containing two ounces of brandy were infused into one of the veins at the bend of the forearm. The effect of this was to produce a very fair pulse and moist warm surface. The abdomen was opened by an incision, including the fistula, and prolonged above and below it sufficiently to allow of a matted bunch of small intestine, about the size of a cocoa-nut, and into which the fistula opened, being separated from surrounding adhesions and lifted out on to the surface. This mass, which no doubt included the whole length of bowel originally involved in the intussusception, was resected, and the two ends of small intestine united by means of a Murphy's button and left immediately beneath the abdominal wound, which was not completely closed in case of any leakage. The patient stood the operation well, and revived for a few hours, only, however, to become collapsed again, and he died ten hours after the resection in spite of a second infusion, having lived for just over three weeks from the date of the first operation.

The mass of resected intestine could not be unravelled, owing to the firm adhesions, but on slitting open the lumen of the bowel composing it, this was found to be greatly reduced in calibre throughout, the narrowest portions measuring less than half an inch in diameter. No healthy mucous membrane remained anywhere, the surface being almost entirely an ulcerated one. No vessels could be found from which the hæmorrhage had taken place, but the bowel was full of recent clot.

Post-mortem examination showed all the organs to be

healthy, and there was no peritonitis. The button union, situated a few inches from the cæcum, was water-tight at a good pressure, and the lumen patent.

Points of some interest in this unfortunate case are (1) the nature of the tumour causing the intussusception; (2) the condition of the bowel entering into the formation of the intussusception; and (3) the occurrence of so severe secondary hæmorrhage associated with separation of sloughs of the mucous membrane. Pedunculated tumours of the small bowel of the adult are very rare, and the position of the tumour in this case (viz. 30 inches from the cæcum), together with the peculiar dimpling of the peritoneum at the site of its attachment, suggested the idea of its possibly being connected in some way with Meckel's diverticulum.

On microscopic examination, however, the tumour proves to be a submucous lipoma. There is a thin muscularis mucosæ beneath the mucous membrane covering the growth; in the pedicle is a small portion of the proper muscular coat of the bowel, slightly prolapsed by the traction of the tumour. The mucous membrane (which presents the characteristic structure of that found in the small bowel) has been destroyed by ulceration over the most prominent parts of the new growth. The specimen may be found in the museum of St. Thomas's Hospital (1107 D).

The only similar specimen of which I know is in the museum of St. Bartholomew's Hospital (2019 D). It was found at the post-mortem examination of a case which had died from some other cause. The tumour is about the size of an almond, and attached by one pole to the interior of the small bowel. It had not produced any symptoms.

Virchow, in his work upon the 'Pathology of Tumours,' states that in persons with a tendency to become obese small collections of fatty cells may usually be found in the submucous tissue of the alimentary tract, though no fatty layer ever exists there. He mentions the rare occurrence of submucous lipomata in the same situation, especially in the stomach and upper part of the small intestine, and figures a specimen of such a tumour in the stomach.

The difficulty of determining whether bowel is or is not recoverable is well illustrated in this case. Several surgeons

present at the first operation agreed that it was quite recoverable, and this entirely coincided with the opinion I had formed. That the chief damage was sustained by the mucous coat is evidenced by its very extensive sloughing, and I do not think this could have been foreseen. In this connection it is interesting to note that in the strangulation of a hernia which has been left long unrelieved, it is the mucous coat of the intestine which first gives way at the site of constriction. Had the bowel shown signs of irrecoverable damage, it is a question whether the involved portion should have been merely short circuited by Halstead's method of lateral anastomosis, or resected with immediate union or formation of artificial anus according to the patient's condition: probably the former would have been the more suitable treatment in this case, for, owing to the extent of gut involved, it would have been difficult to decide how much to resect; while to have removed the whole 34 inches would probably have been more than was necessary, and would have increased the amount of shock by prolonging the operation.

On looking back I much regret not having operated immediately after the first bleeding took place, following the well-known law with regard to secondary hæmorrhage, instead of waiting in the hope of there being no repetition. The effect of infusion in such cases is worthy of note, for by its aid patients far too collapsed to stand operation may be so revived as to permit of the necessary surgical assistance being afforded. In my experience the addition of an ounce or so of brandy to the saline solution adds very materially to the efficacy of intra-venous infusion. I am greatly indebted to Mr. Shattock for his careful examination of the specimen.

A CASE OF INTRA-UTERINE RICKETS.

By G. H. MAKINS, F.R.C.S.

Although the occurrence of rickets as an intra-uterine disease is fairly generally allowed, yet instances are far from common, and this encourages me to place on record the following case met with in the out-patients' department of the Hospital. I can only express my great regret that circumstances did not allow me to complete the case by a histological examination, as the child died somewhat unexpectedly during my absence from town.

Maternal and family history.—The mother is now twenty-four years of age, and has been married three years. She has enjoyed good health both before and since her marriage, and careful examination reveals neither history nor any objective evidence of an attack of syphilis. She looks somewhat anæmic, but considers herself in good health, and complains of nothing. She has had no miscarriages, and has two children—one now a year and nine months old, and the child shortly to be described. As far as can be gathered there has been nothing unusual in her food during the time she carried her children, and she is now well nourished, and has plenty of milk in both breasts.

The elder child is said to have been healthy and well nourished at birth, although a small child. He was weaned at ten months, and has now been on his legs three months.

He at present offers signs of well-marked rickets of a moderate degree, the epiphyses being enlarged, but no curving of the bones has taken place. He exhibits no signs indicating congenital syphilis.

A. P—, æt. 14 days. The child was born at full time, but is very small, weighing only five and a half pounds in his flannel clothes. He exhibits in a marked degree almost every deformity common to ordinary rickets, with some peculiarities to be noted later on. There are no signs of congenital syphilis.

The skull is large, there are no actual bosses, both anterior and posterior fontanelles are widely open, the coronal groove is well marked, and ossification in the occipital bone is strikingly deficient. In place of the ordinary islands of cranio-tabes, the tabular portion of the bone is practically membranous, and through the membrane are scattered numerous islands of bone. The development of the face is fair, as would be expected at this date.

When the child is set up there is a large general posterior kyphosis.

There is general beading of the ribs anteriorly, also beading in the neighbourhood of the angles, and there is well-marked lateral flattening of the chest-wall as a whole.

The curves of the clavicles are not notably exaggerated, but the centre of the shaft is considerably thickened. The humerus is much thickened at the centre of the shaft, and the typical bend exists at the point of insertion of the deltoid muscle. The radius and ulna are curved outwards.

The femora are much thickened, and have a strong anterior curvature. The tibiæ and fibulæ are thickened below the centre, compressed laterally, and markedly curved forwards at the junction of the middle and lower thirds.

The feet rest in a typical calcaneus position, and can be placed in contact with the front of the leg with very slight pressure.

The most striking characteristic of the deformity of the long bones consists in the thickening in the neighbourhood of the primary centres of ossification, and the almost complete absence of epiphysial enlargements. There is no evidence of enlargement of either spleen or liver.

The mother was ordered to take cod-liver oil, and to continue to suckle the child, but no further treatment was adopted.

During the next five months the child was kept under observation, and in some respects improved; growth was fair; he looked well nourished, the arms and forearms improved considerably, and the islands of bone in the occiput increased in size. In the lower extremities, however, no change for the better occurred, the curves and thickening of the bones remaining as well marked as when he was first seen. In the early summer he died from infantile diarrhœa after a few days' illness. At no time did any evidence of congenital syphilis appear.

Several points in the above case seem worthy of note. First of all, it is remarkable that the limbs and chest presented deformities usually ascribed to muscular action, while it seems clear that in this instance they must have been due to uterine pressure mainly, if not alone; thus the flattening of the chest-wall must have resulted from the resting on it of the arms, and the curvature of the arms and forearms to the limbs having rested on the curved trunk. The outward curve of the forearm usually ascribed in infantile rickets to progression in part on the spreading pronated forearm is, in this relation, especially noteworthy. Secondly, the great enlargement of the centre of the shafts of the long bones, and the deficiency of epiphysial enlargement was a striking feature, which one would perhaps naturally expect considering that, at this period of development, active changes of ossification would be almost limited to the primary centre. In a case published by Dr. Barlow in the 'Transactions of the Clinical Society'[1] some thickening was noted in the centre of the humerus, but no mention is made of similar thickenings elsewhere. The same curvatures of the shafts, especially in the lower limbs, were, however, observed, and there was well-marked epiphysial enlargement at the lower end of the femur and upper end of the tibia; this child, however, was ten weeks old when first seen. The swellings in my case were more or less spindle-shaped, and did not seem to be in any instance due to intra-

[1] Vol. xxi, 1888, p. 290.

uterine fracture—a point well considered at the time both by myself and others who saw the child.

During the subsequent course the epiphyses still remained destitute of any appreciable change, but it must be borne in mind that until his fatal illness the child steadily improved in most respects. I should perhaps add that there was no reason to suspect subperiosteal hæmorrhage, as there were no other signs of scurvy; and with regard to congenital syphilis, neither myself nor anyone else who saw the case amongst my colleagues detected any sign of it.

The elder child, the subject of ordinary infantile rickets, has steadily improved under treatment.

THE RADICAL CURE OF UMBILICAL HERNIA.

By BERNARD PITTS, M.C., F.R.C.S.

When an umbilical hernia has to be operated on for strangulation or obstruction, an attempt at a radical cure is, when possible, made, but very often the patient's general condition and the complications found within the sac compel the surgeon to be content with the relief of immediate symptoms, and he has reluctantly to leave the sac and aperture alone, being only too glad to get his patient back to bed after as small an amount of operative interference as possible. The operator must be guided by his personal experience and by the special features of each individual case.

The remarks in this paper will therefore be confined to cases in which the radical cure is performed on umbilical reducible or irreducible herniæ, uncomplicated by either signs of strangulation, inflammation, or obstruction.

Interference is very rarely necessary in children, since a cure can almost always be obtained by constant and well-applied pressure. Even amongst the poorest and most neglected of the children who attend our hospitals, a natural cure by contraction of the aperture occurs before the age of puberty, notwithstanding the absence of treatment, or its careless and intermittent character. The writer, during ten

years' out-patient experience at the Children's Hospital, Great Ormond Street, only met with two cases which seemed to require operative interference. The most effective way to prevent protrusion is by a small firm pad maintained in position by a broad strip of adhesive plaster, and supported by a belt or binder. A belt with pad attached rarely keeps in place, and the pressure is not sufficiently constant. When rubber adhesive plaster is used the child may be washed or have a bath without disturbance of the pad. This treatment is, however, difficult to carry out when the skin is tender or eczema is produced. If after prolonged treatment by compression the hernial aperture has increased in size, operative treatment by removal of the sac and suturing the aponeurotic opening may be undertaken. The operation is often somewhat difficult in children, owing to the great tendency for omentum or bowel to protrude during suture or ligation of the peritoneum.

The aponeurotic margin of the almost circular aperture is also not easy to close without tension. If the primary object is not gained, the action set up by the operation, and the after rest in bed, will invariably lead to a shortening of what may be termed the life of the child's hernia.

Umbilical hernia in adults does not show any tendency towards natural cure. It occurs more commonly in persons who have got rapidly stout, and especially in women who have borne children. The tendency to partial irreducibility is very great, and when once such a hernia becomes even partially irreducible it cannot be kept in complete subjection by any truss or support, and becomes a source of both danger and discomfort. The question, therefore, of an attempt at a radical cure may well be entertained before the hernia has got to a very large size, and before the patient becomes an unfit subject by reason of great obesity, pulmonary emphysema, cardiac weakness, or general deterioration of health. In carefully selected cases the operation may be undertaken with reasonable hope of success, although the hernia is of very large size and the patient extremely stout, but the surgeon should keep the case for some time under observation and general treatment before operation, and should satisfy himself as to the general fitness of his patient to

undergo what is practically an abdominal section, with removal most likely of a considerable portion of omentum. The removal of omentum is not only often necessary, on account of the changes which have taken place by its confinement in the sac, but it also is often advisable to remove large portions of healthy omentum in order to reduce the tension of the abdominal walls, and thus lessen the tendency to relapse.

Under such conditions the responsibility in the selection of a suitable case is very great, for however careful and successful the operator may be in avoiding wound infection he may lose his patient from bronchitis or heart failure.

A local inflammation about the wound is more likely to spread to the peritoneal cavity than when the operation is done in the inguinal or femoral region. The margins of the opening do not come together easily without tension, and firm pressure cannot be maintained by dressings over the wound. Any suppuration caused by the deep stitches may extend between the peritoneum and the abdominal wall, and such an abscess may burst into the peritoneal cavity instead of making its way to the surface of the wound. The aponeurotic opening can only be closed without tension by free resection of the margins in such a way as to convert the opening into an elongated ellipse ; and to do this the abdominal cavity must be opened in the middle line for a short distance, both above and below the original aperture. The wound left is much the same as after an abdominal exploration, and can be brought together without undue strain at any particular point, and direct union may be confidently expected.

The following case illustrates very well the points under consideration. For the notes of the case, and the very accurate and good drawings, the writer is indebted to his friend and former dresser, Mr. M. A. Teale. The appearance of the distended hernia was so remarkable, that a drawing was made by Mr. Teale directly after the patient's admission to the hospital.

Annie H—, æt. 43, admitted to St. Thomas's Hospital, February 28th, 1894, with large umbilical hernia.

Family history.—Patient is married, and has had thirteen children ; ten are living and healthy. The swelling was first

noticed two years ago as a small round tumour about the size of a walnut, covered by smooth skin, and occupying its present position. Previous to the actual appearance of the swelling the patient had noticed a weakness of that part of the abdominal wall, owing to an impulse being apparent on coughing. The swelling was reducible, though it returned readily after pressure was removed, and consequently she did not consult a doctor, but made herself a belt, without, however, using any pad. In spite of the belt the swelling gradually increased in size, until at the last confinement (fifteen months ago) it was larger than an orange.

The patient first noticed lobulation after this confinement. During the last six months she has been subject to attacks of pain in the tumour. These attacks of pain are often accompanied by sickness, and increased size and hardness of the tumour. Lately she has been unable to reduce the swelling herself, but it was reduced by a doctor a few days before admission to the hospital.

State on admission.—A very stout but healthy-looking woman, complaining of a lobulated protrusion in the umbilical region, causing inconvenience and pain.

The hernia seems to consist of about six lobules, and is covered by healthy skin and fat. It is tense, but gives an elastic yield throughout all parts to pressure between finger and thumb, accompanied by slight gurgling. The average diameter of the swelling is seven inches, and that of the neck of the hernia three inches.

Attempts at reduction are unsuccessful and cause pain, but there is distinct impulse on coughing. Two ice-bags ordered to be placed on the hernia, and a restricted diet given. In a few days' time the contents of the sac became reducible, with the exception of a large piece of omentum, the sac giving the appearance represented in fig. 2, lying upon the lower part of the abdomen in a flaccid and wrinkled condition, the walls being thick and knotty to the touch. Intestine obviously comes down into it if the patient strains in any way, but it is easily reducible again.

On invaginating the neck of the sac with the finger the opening in the abdominal wall can be plainly felt, and is about the size of a crown piece. Warm boracic lotion was

Fig. 1.

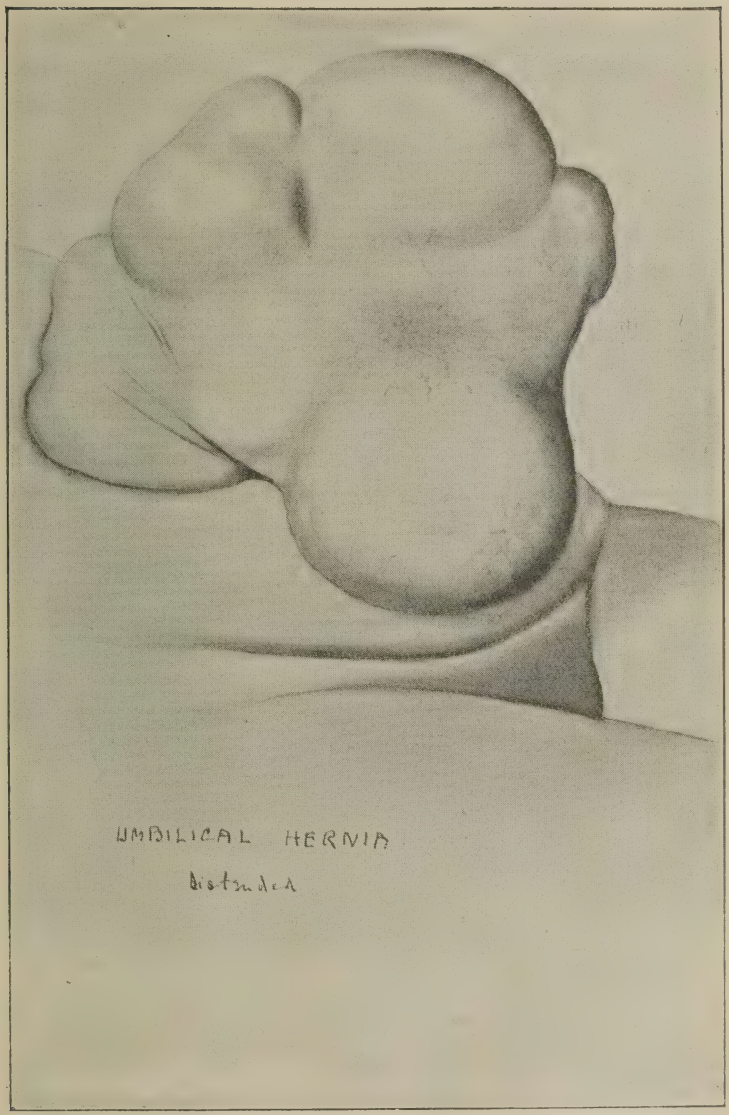
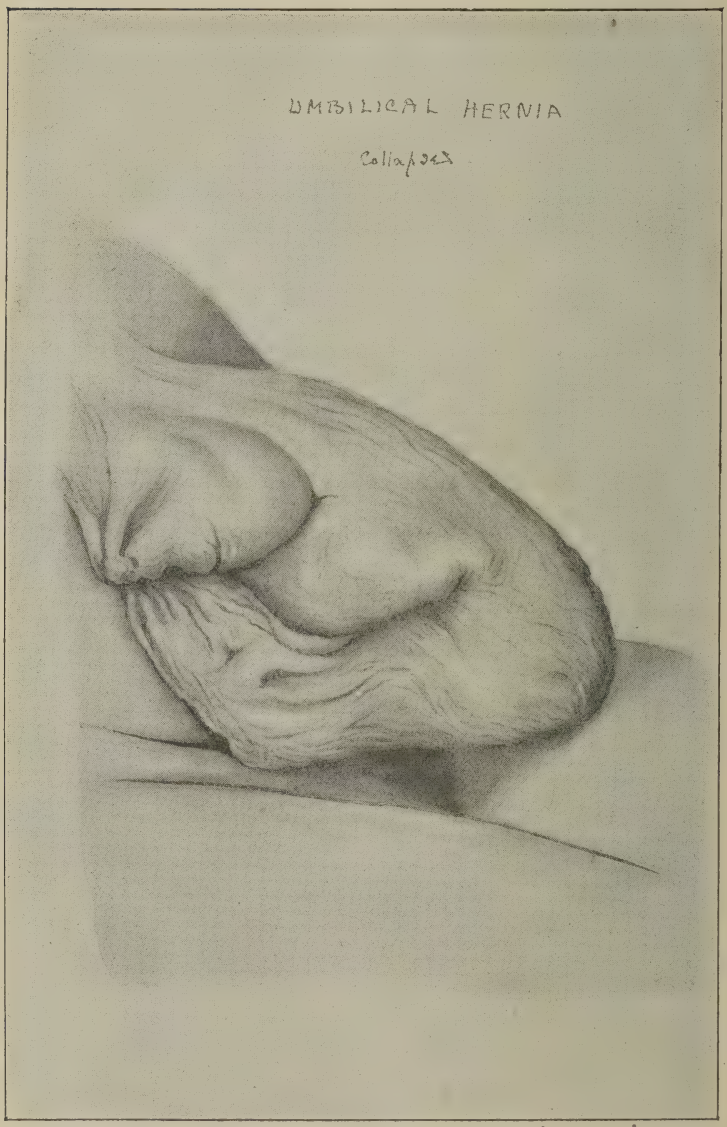


Fig. 2.



now applied instead of the ice-bags, and on March 8th the abdomen was packed in the usual way for operation.

The operation was on March 9th. The hernial sac was drawn well over to the left side, and a skin incision made from above downwards, beginning in the middle line one and a half inches above the pedicle, passing close round its right side, and ending in the mid-line, one and a half inches below it. Then the sac was drawn over to the right side, and a second incision, beginning and ending in the first, was carried round the left side of the pedicle. The peritoneal cavity was now opened in the mid-line, and by means of scissors the pedicle of the sac was cut completely round at the junction with the abdominal parietes, all bleeding vessels being secured during the proceeding. The sac being now drawn forward, sponges were placed in the abdominal cavity to keep back the intestines.

Omentum only was found to be entering the sac, and to be adherent to its interior. The unchanged omentum was ligatured in three pieces as it entered the sac and then divided, so that the hernial sac and its omental contents were removed *en masse*. Twelve silkworm-gut sutures were now passed, by means of a mounted needle, through the sides of the abdominal opening, including skin, adipose tissue, aponeurosis, and parietal peritoneum, and a number of horsehair sutures were passed superficially to bring the skin edges more completely into apposition. The wound was dressed with iodoform gauze and wood-wool, and bandaged firmly. The patient made a satisfactory recovery, except that a week after operation some suppuration occurred in the situation of the upper stitches. The sac when removed showed a loculated interior, the fibrous partitions between the loculi having given the irregular, knotty feeling noticed when the collapsed sac was examined before operation. Most of the loculi were lined with adherent omentum.

The patient was examined three months later, and found to be in good health, without any recurrence of abdominal pain, and with a firm sound cicatrix. She was then wearing the abdominal support applied before leaving the hospital. When next examined, eighteen months after operation, it was found that she had discontinued to wear

the support; the cicatrix had widened somewhat, and some degree of general ventral hernia was present, very similar to the stretched linea alba which is sometimes seen to occur after pregnancy. Her general health was good, and she was entirely free from the attacks of abdominal pain which were so frequent before the operation. Unfortunately her tendency to put on abdominal fat was on the increase, and the intra-abdominal pressure thus caused was no doubt a considerable factor in the causation of recurrence. In very stout subjects it is always difficult to obtain a good and lasting union in the linea alba, more especially when any suppurative action has occurred during the period of healing.

Very few further remarks are necessary, since the case narrated speaks for itself. It would be difficult to select a case of large hernia more fitting for operation, since the pedicle was well defined, and the size of the swelling was steadily increasing. Interference was also directly called for by the constant attacks of pain and imprisonment of bowel. There can be little doubt that before long one of these attacks would have ended in actual strangulation. Any attempt to close the opening by removal of the sac and simple suturing of the ring must have been unsatisfactory. The removal of the sac and its coverings *en masse* without previous exploration made the operation simple in character, and one attended with the least possible disturbance of parts. This method can only be adopted when the surgeon is certain that all bowel has been reduced. However small an umbilical hernia may be, the umbilicus itself should be removed.

Those herniæ which appear in the adult in the epigastric region, unlike the umbilical, have little tendency to become large in size. They are, however, even when quite small, often painful, and may give rise to symptoms very like dyspepsia. The cause of the epigastric pain is not infrequently overlooked when the protrusion is very small and the patient stout. The pain is absent during rest, but unfits the patient for active exercise. In several such cases under the writer's care operation has been called for by the discomfort on exertion, and has been attended with complete relief of symptoms.

CEREBELLAR ABSCESS SECONDARY TO EAR DISEASE,

ILLUSTRATED BY A CASE SUCCESSFULLY TREATED BY OPERATION.

WITH REMARKS ON DIAGNOSIS, AND WITH A TABLE OF PUBLISHED CASES.

By THEODORE D. ACLAND, M.D.,

AND

CHARLES A. BALLANCE, M.S.

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PART I.

Albert Henry Jones, æt. 15, shop boy, was admitted into St. Thomas's Hospital May 11th, 1894, with the following history:—Five weeks previously he had suffered from severe vertical and frontal headache, which came on

suddenly. The pain was constant and much increased by movement. He said that his legs and feet felt as if they were giving way, and he complained of staggering, but not of giddiness. For three weeks he continued at work, during which period he noticed that he had often to cling to a railing or some fixed object to prevent his falling; this he attributed to the weakness of the legs. His mother volunteered the statement that at this time he used to stagger as if he had been drinking when he came home from work; on one occasion he actually overbalanced himself and fell. Two weeks before admission he was compelled to give up work, the headache increased, and he suffered much giddiness even when lying down. This giddiness was so severe that he had to close his eyes in order to obtain relief. Four days before admission he noticed that the objects he looked at appeared to be going round from right to left; he himself seemed turning in the opposite direction—from left to right, *i.e.* toward the lesion. The giddiness became extreme, —indeed, he was unable to stand up. At this time the headache, which was occipital and vertical, became very severe, and the feeling of weakness in the limbs increased. Urgent purposeless vomiting also came on. About this time his father noticed that the boy's eyes oscillated.

Previous history.—At the age of six he suffered from whooping-cough and measles; subsequently he suffered from deafness in the right ear, but it is said that at this time there was no discharge from the meatus. Six months after the measles otorrhœa from the right ear was first noticed, and this has continued without intermission ever since, *i. e.* for nine years. The discharge was often thick and "chocolate" coloured. No treatment was adopted, and the patient was scarcely aware that he was deaf.

Family history.—No fact bearing on the case elicited.

On admission, patient was pale, and looked very ill. He complained of intense vertigo and severe pain in the occipital region, with frontal and vertical headache and diplopia. He was lethargic and very disinclined to be moved. When left to himself in bed he had a tendency to curl up on the left side with general flexion of the limbs. Both eyes were deviated towards the left, and on attempting to turn

them to the right the right eye was not moved beyond the middle line, while the left moved beyond the middle line, the cornea looking forwards and inwards. There was horizontal nystagmus, and homonymous diplopia on looking to the right. The pupils acted both to light and accommodation, and were equal. There was early optic neuritis, the inner margins of the discs being ill-defined.

There was no weakness of the facial muscles on either side.

Hearing on the left side was normal; on the right the watch was not heard on contact. The right membrana tympani was almost entirely destroyed, and through the granulation ring left thick offensive pus was seen welling up from the tympanum into the meatus. There was neither tenderness nor œdema over the mastoid, nor was there tenderness over any part of the skull. *Taste* normal. *Smell* normal. *Sensation* not impaired on face, or trunk, or limbs.

Right arm.—There was obvious loss of power of movement of all the joints of the right upper limb. The left upper extremity also appeared weak, but in a much less degree than the right.

Right leg.—There was slight but not very marked loss of power in the right lower limb as compared with the left. There was no rigidity of either arms or legs.

The *right* knee-jerk was *more* brisk than the *left;* there was no ankle or patellar clonus on either side.

There was no retraction of the head.

No evidence of disease was detected in heart, lungs, or abdominal viscera. Pulse 56; temp. 96·2°.

The diagnosis of abscess in the right lobe of the cerebellum was made, and at 8.30 p.m. on the day of admission (May 11th) the patient was placed under chloroform and the following operation carried out.

Mastoid operation.—The head having been shaved and cleaned, a curved incision through the scalp was made behind the right pinna along the line of the hair down to the bone. The incision commenced at a point vertically above the osseous meatus, and extended to the apex of the mastoid process. The tissues over the mastoid were then detached from the bone and thrown downwards and forwards

with the pinna. No sign of disease was manifest, but the supra-meatal spine and triangle were defined, and were taken as guides during the further mastoid operation. The antrum was opened by means of a broad gouge, the layers of bone external to it being of considerable hardness and quite solid. The antrum contained slightly offensive pus and granulation tissue, and parts of the inner and posterior walls were certainly carious. The posterior wall of the osseous meatus and the tympanic ring were then cut through and removed, so as to throw (as in the Stacke operation) the antrum, attic, tympanum, and osseous meatus into one cavity. An attempt was then made by means of the curette and antiseptic flushing to remove all septic material and thoroughly cleanse the cavities in the masto-petrous bones, from which it was believed an intercranial inflammation had arisen. It was not made out whether the tegmen antri or tegmen tympani was carious, but it was thought that they were not diseased.

Cerebellar operation.—From the middle of the above curved mastoid incision another incision was now carried backwards for about $2\frac{1}{2}$ inches along the superior curved line, and the original incision was prolonged a little beyond the apex of the mastoid. The triangular flap thus marked out was then thrown downwards and inwards, all the tissue down to the periosteum being reflected. A $\frac{5}{8}$-inch trephine was next placed on the occipital bone, so that its anterior margin corresponded with the posterior margin of the mastoid process, and its upper margin was below Reid's base line. The trephine was therefore placed on the occipital bone in the region of the insertion of the superior oblique muscle, whose fibres had previously been removed. In this manner the horizontal and vertical portions of the sigmoid sinus were avoided, and it was planned to remove bone (with the trephine) which protected externally the anterior part of the lateral lobe of the cerebellum, where a cerebellar abscess, if present, and if due to infection from the mastoid or petrous bones, is most likely to be found.

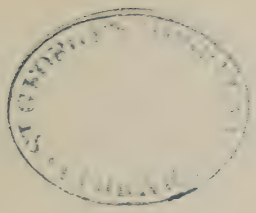
When the disc of bone was taken away the dura bulged under plus pressure into the opening. On incising the dura the cerebellum bulged without pulsation into the trephine opening. A trocar and cannula were then passed into the

DESCRIPTION OF PLATE I,

Illustrating Dr. Acland's and Mr. Ballance's Case of Cerebellar Abscess secondary to Otitis Media Suppurativa treated successfully by Operation.

The drawing shows the appearance of a *transverse section of a skull and brain,* made to illustrate this paper.

The exact line of section is seen in the small drawing of the skull in the lower left-hand corner. A B is Reid's base line. A C is the line of section which makes an angle of 12° with the line A B. The line A C passes in front just below the upper margin of the orbit, and behind divides the occipital bone below the external occipital protuberance; midway the line A C cuts the squamous half an inch above the external auditory meatus.



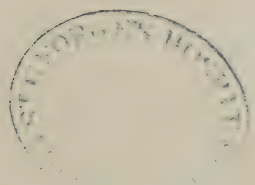
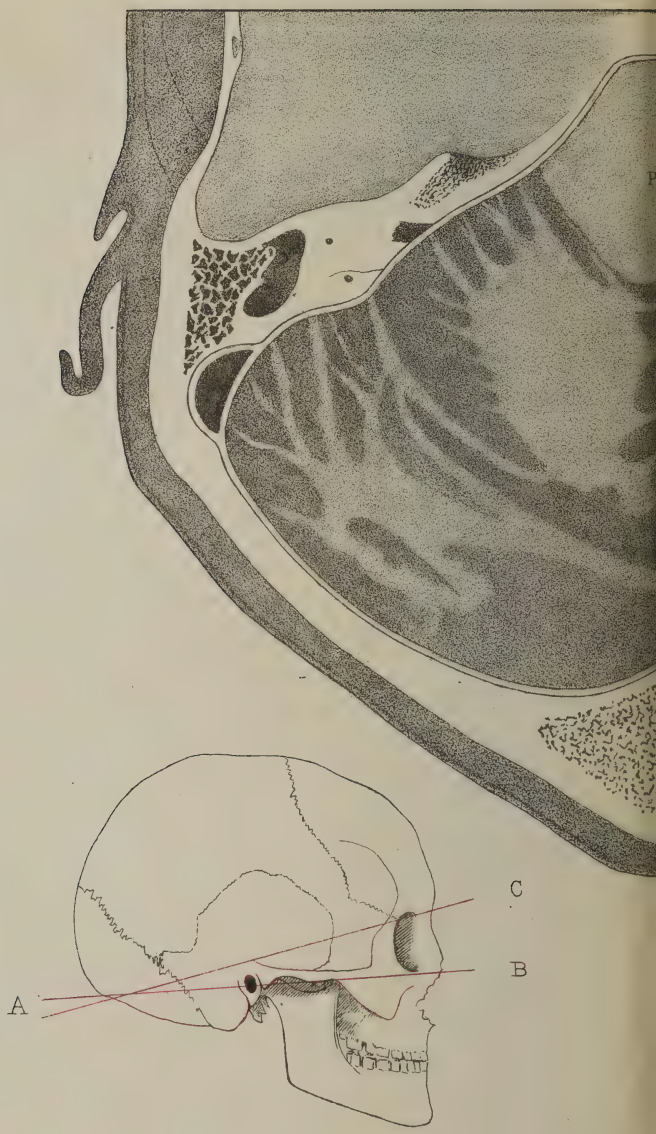


Plate I.



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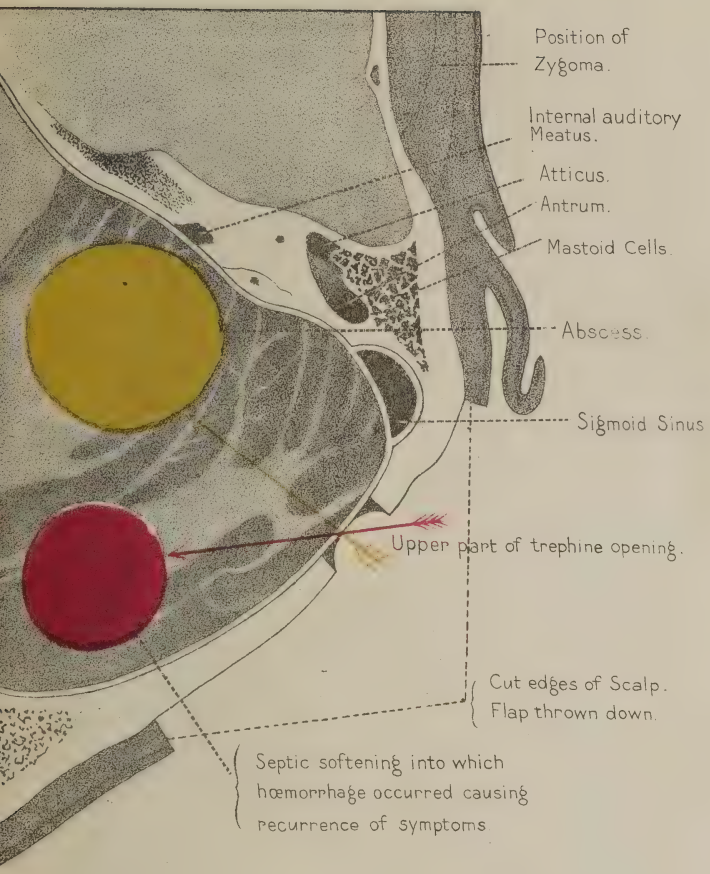

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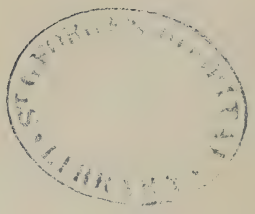


cerebellum in the direction forwards, upwards, and inwards, across the anterior and outer part of the lateral lobe of the cerebellum and towards the internal auditory meatus on the posterior surface of the petrous bone (see Plate I). Three to four drachms of slightly offensive pus immediately escaped. The pus was reached about 2 inches from the surface of the scalp. A silver probe was now passed through the cannula, which was withdrawn. The probe was used as a guide to the abscess cavity, dressing forceps being introduced and opened so as to enlarge the channel into the abscess. A silver drainage-tube was now passed through the middle of the triangular flap and for about 2 inches into the cerebellum. The flap was then sutured in place with horsehair, as was also the flap made for the mastoid operation. A rubber drainage-tube had previously been passed so as to drain the antral attic tympanal cavities; it projected through the line of sutures behind the pinna and through the cartilaginous meatus in front, and its ends were joined by a thread of silk. As far as possible the mastoid and cerebellar regions were dressed separately with cyanide gauze, wrung out in hot 1 in 40 carbolic lotion. During the operation the antiseptics used were 1 in 40 carbolic lotion, and 1 in 1000 perchloride of mercury solution.

May 12th, 4 a.m.—The pulse, which previous to the operation had been 56, had risen to 84, and the temperature had risen from 96·2° to 99·8°. 12 noon, no headache, vomiting, diplopia, conjugate deviation of eyes, or giddiness; pulse 84, temp. 98·8°.

13th.—Condition much the same. Temp. 97°—97·8°; pulse 84.

14th.—Pulse and temperature the same. No pain, headache, nausea, or vomiting. The right grasp still considerably less than left. *Right* knee-jerk and plantar reflex more brisk than left. *Nystagmus* centrifugal, *i. e.* from and not towards the central point. No deviation of eyes. External recti act well. Pupils active and equal. Optic neuritis more marked, but still slight.

15th.—Temp. 97·8° to 98·4°. Both knee-jerks obtained, the *right* being more brisk than the *left.* Power of flexion of knees feeble on both sides and barely maintained, the

patient relaxing the effort with a jerk. The grasp of right hand much weaker than left. Flexion of elbow feeble on both sides, that on the left being better maintained. Ocular movements well performed in all directions, deviation of the eyes to the right being accompanied by considerable nystagmus. No vomiting or pain.

16th.—Condition unchanged. Pulse 80; temp. 97·8° to 98·2°. Tongue clean. Nystagmus still considerable.

17th.—Temp. 97·4°; pulse 84. No headache, vomiting, or giddiness. Nystagmus less noticeable. Takes liquid food well. Sleeps well.

18th.—Temp. 97°; pulse 80. No headache. Slight nystagmus. Up to this date the patient had been dressed each day with cyanide gauze wrung out in hot 1 to 40 carbolic solution lotion. There had been very little discharge, but on this day the stained part of the dressing had a distinctly foul odour. The parts were gently irrigated, and the silver tube, which was $2\frac{3}{8}$ inches long, was removed from the cerebellum, and changed for one $1\frac{3}{4}$ inches long. Dressings ordered to be changed every eight hours. Up to this period the motions were offensive, and relief was obtained mostly by enema.

19th.—Temp. 97°; pulse 80. No headache or giddiness. By dynamometer grasp of *right* hand 45 kilogrammes, left hand 50 kilogrammes.

20th.—Temp. 97·2°; pulse 80. Much nausea complained of all day. At 6.30 p.m. the dressing was removed and the tube taken out to be cleaned, and while the surface was being gently irrigated with 1 in 20 carbolic acid solution an alteration was suddenly noticed in the patient. Marked lateral nystagmus occurred, and was soon followed by conjugate deviation of the eyes to the left (opposite to the lesion), and a few minutes later the patient vomited. 8 p.m., temp. 97·2°; pulse 60. Has vomited again.

21st.—9.30 a.m., temp. 98°; pulse 68. Much vertigo. Has vomited several times during the night. 3 p.m., patient drowsy and apathetic; he has vomited once since 10.30. No deviation of eyes. Lateral nystagmus well marked. Temp. 99°; pulse 78. On separating the margins of the wound a quantity of thin dark fluid (? broken-down blood-clot) escaped.

The silver tube ($1\frac{3}{4}$ inches long) was removed, and was replaced by the old tube ($2\frac{3}{8}$ inches long). After the dressing the boy said he felt better. No headache or vertigo. Grasp on both sides appeared equal. 6 p.m., temp. 100°.

22nd.—8 a.m., temp. 96·6°; 12 noon, 96·4°; evening, 96·8°. Drowsiness well marked, but no vomiting. Lateral deviation of eyes and lateral nystagmus. In the evening the patient's wound was dressed in the operating theatre with a view of making some further exploration if thought at the time desirable; but as the condition had improved a little, the pulse being 88 and the temp. 96·8°, nothing was done.

23rd.—Temp. 96·2°—97·2°. No alteration in condition noted.

24th.—Temp. 96·2°—97·2°; pulse 76. Vomited once during the day. No headache or vertigo. Silver tube removed from wound.

25th.—Temp. 97°—98·4°; pulse 80. Vomited twice during night. Some headache and giddiness.

26th.—Temp. 97·4°; pulse 68. Vomited once during night; much giddiness and headache.

27th.—At midnight temp. 97°; pulse 48. Violent vomiting at noon. During each twenty-four hours much drowsiness and occipital headache; pulse varying from 48 to 64. Nystagmus more marked.

During the last four days, the silver tube having been removed on the 24th, forceps were introduced along the track of the wound as far as the abscess, but no fluid was evacuated. Breath foul. Bowels opened with difficulty, very little relief by enema. Motions offensive. Drowsiness and headache more marked. 8 p.m., temp. 97·4°; pulse 52. Under chloroform the original triangular occipital flap was thrown down, and a small hernia cerebelli was found projecting through the opening in the occipital bone. On examining the old track, which ran forwards, upwards, and inwards, no pus or other fluid escaped. A trocar and cannula was then directed backwards and inwards through the posterior parts of the lateral lobe of the cerebellum, and immediately a gush of dark treacly fluid escaped. The flow

ceased suddenly as though a cavity had been emptied. After the operation (midnight) the temperature rose to 98·6°, and the pulse to 64.

28th.—At 8 a.m. temp. 98·4°; pulse 60. No vomiting, headache, or vertigo since operation. Breath still offensive. On changing the dressing it was found that there had been a considerable discharge of thin dark bloody fluid, and this was still continuing. Mental condition much improved. Optic neuritis more marked.

29th.—Temp. 96·8° to 97·6°; pulse 60. No headache or vertigo. On changing the dressing it was found that the discharge from the wound had ceased. Patient bright, taking food well.

30th.—Temp. 96·8° to 98·6°; pulse 52 to 60. Vomiting and giddiness returned. At 4 p.m. a grooved director was passed into the posterior part of the cerebellum, and much treacly bloody fluid escaped. The patient was not under the influence of an anæsthetic, and at once exclaimed that he felt better, and that the giddiness was gone. 10 p.m., no sickness since the escape of fluid from the cerebellum; dressings again changed.

31st.—Temp. 97·2°; pulse 68 to 80. No headache, vomiting, vertigo, or photophobia. Bowels open by Pil. Col. c Hyosc. gr. x. Motions less offensive. Tongue cleaner. Appetite returned. Mental condition excellent.

June 1st.—Temp. 96·6° to 97·8°; pulse 70. No vomiting or headache. Marked weakness of right grasp.

2nd.—Temp. 97° to 98·4°; pulse 70 to 80. Still some blood-stained discharge from the wound; about a drachm of fluid distending the flap was evacuated. A small drainage-tube was inserted just underneath the flap.

3rd.—Temp. 97° to 99·2°; pulse 72 to 80. More blood-stained fluid and a little pus on the dressing. Hernia cerebelli seen through edge of flap. Beef-tea vomited.

4th.—Temp. 97° to 98·4°; pulse 72. No change noted.

5th.—Temp. 97° to 98·4°; pulse 72 to 80. No headache or vomiting. Some nystagmus. Right grasp much weaker than left.

6th.—Temp. 97° to 97·8°; pulse 78. No sickness or headache. Wound healing. The part over the hernia cerebelli

covered with a whitish film. Right grasp stronger. Breath less offensive. Bowels opened for the first time naturally.

8th.—Temp. 97° to 97·8°; pulse 88. Progress satisfactory, but some mental depression. Nystagmus present, but less marked.

11th.—Temp. 97° to 97·8°; pulse 84. This morning vomited twice. Right grasp 25 kilos., left grasp 50 kilos.

13th.—Temp. 97° to 97·6°. More pus on the dressing. Optic neuritis marked. Margin of both discs more hazy; considerably more striation. Some of the small vessels obscured.

14th.—Tube under flap removed.

16th.—Temp. 97·4°; pulse 80. Very little discharge on dressing. General condition good. Loss of power more marked in the arms than in the legs. Grasp: R. 35 k., L. 45 k.

21st.—Temp. 98·8°; pulse 80. Discharge from wound less. General condition improving. Appetite ravenous.

22nd.—Temp. 98·6°; pulse 80. On this date and on June 16th and 21st the knee-jerks were not elicited; the right grasp still weaker than the left. Sight good.

23rd to 25th.—Improvement maintained. Nystagmus very slight.

26th.—Optic neuritis diminishing. Can read Jaeger No. 1.

28th.—Right and left grasp equal, 50 kilos.

July 3rd.—Progress very satisfactory.

7th.—Right knee-jerk more brisk than left. Slight nystagmus. Gait fairly steady.

13th.—Marked improvement. Grasp of the two hands equal. Still some nystagmus.

14th.—Optic neuritis diminishing.

26th.—General condition much improved. Patient quite convalescent. Only slight nystagmus remaining. Wound soundly healed, tube passing through antrum, tympanum, and meatus still *in situ*. Drainage-tube irrigated with dilute carbolic acid solution three times a day, the ear being covered with a pad of antiseptic wool.

October 17th.—General condition excellent. Patient feels quite well. Mr. Lawford reports:—"Discs normal, ocular movements perfect, pupils normal." No headache, vertigo, nausea, or defect of vision. Gait is steady and without abnormality. Patient can walk *well*. Both knee-jerks pre-

sent, but more easily elicited on the right than left. No alteration of sensation in limbs or trunk. Wound soundly healed; opening through the occipital bone not discoverable by palpation; tube through mastoid changed for four strands of horsehair. Discharge *nil.*

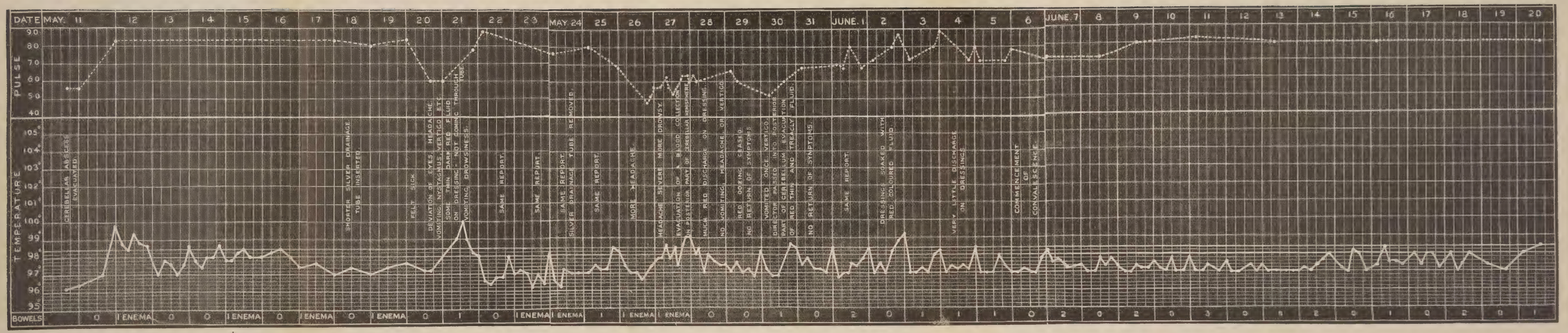
November 5th.—Horsehair drain removed, no discharge. Patient to return to work.

December 15th, 1895.—The patient is now in perfect health.[1]

[1] The patient was present at a meeting of the Neurological Society of London on December 7th, 1894.

PULSE AND TEMPERATURE CHART. CASE OF ALBERT JONES. CEREBELLAR ABSCESS.

MAY AND JUNE, 1894.


DATE
MAY. 11 12 13 14 15 16 17 18 19 20 21 22 23
MAY. 24 25 26 27 28 29 30 31
JUNE. 1 2 3 4 5 6
JUNE. 7 8 9 10 11 12 13 14 15 16 17 18 19 20
PULSE
90 80 70 60 50 40
TEMPERATURE
105° 104° 103° 102° 101° 100° 99° 98° 97° 96° 95°
CEREBELLAR ABSCESS EVACUATED
SHORTER SILVER DRAINAGE TUBE INSERTED
FELT SICK
DEVIATION OF EYES. HEADACHE. VOMITING. NYSTAGMUS. VERTIGO ETC.
SOME THIN DARK RED FLUID ON DRESSING NOT SOMNIC THROUGH TUBE
VOMITING DROWSINESS.
SAME REPORT.
SAME REPORT.
SAME REPORT.
SAME REPORT.
SILVER DRAINAGE TUBE REMOVED.
SAME REPORT.
MORE HEADACHE
HEADACHE SLIGHT MORE DROWSY
EVACUATION OF A BLOOD COLLECTION IN POSTERIOR PART OF CEREBELLAR HEMISPHERE
MUCH RED DISCHARGE ON DRESSING
NO VOMITING HEADACHE OR VERTIGO
RED DURING CEASED. NO RETURN OF SYMPTOMS
VOMITED ONCE. VERTIGO DIRECTLY PASSED IN TO POSTERIOR PART OF CEREBELLUM. EVACUATION OF RED THIN AND TREACLY FLUID.
NO RETURN OF SYMPTOMS.
SAME REPORT.
DRESSINGS SOAKED WITH RED COLOURED FLUID
VERY LITTLE DISCHARGE ON DRESSINGS
COMMENCEMENT OF CONVALESCENCE
BOWELS
0 1 ENEMA 0 0 1 ENEMA 0 1 ENEMA 0 1 ENEMA 0 1 0 1 ENEMA
1 ENEMA 1 ENEMA 1 ENEMA 0 0 1 0 2 0 1 1 1 0 2 0 2 0 3 0 2 2 0 1 0 2 0 1

PART II.

SYMPTOMS, DIFFERENTIAL DIAGNOSIS, AND TREATMENT OF CEREBELLAR ABSCESS.

Synopsis.

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I. Introductory.

Abscess of the cerebellum, if any conclusion can be drawn from the published cases, so frequently escapes recognition during life that no excuse is needed for endeavouring to unravel some of the more difficult problems involved in its diagnosis, or for examining in detail those symptoms which it seems probable may in uncomplicated cases lead to a correct recognition of the seat of disease.

II. Summary of Case.

The following is a brief summary of the foregoing case, to give emphasis to the more important features in the clinical history.

On May 11th, 1894, a boy æt. 15 was admitted to St. Thomas's Hospital. Nine years previously he had had measles. This disease was complicated by right otitis media with suppuration, which has continued up to the present time. Five weeks before admission he had headache and staggering gait. Two weeks before admission he gave up work because of increasing headache and vertigo. Four days before admission he suffered in addition from vomiting and lateral movement of the eyeballs.

On admission (May 11th) his condition was as follows: —He was thin, pale, and very ill, and complained of severe frontal and occipital headache, vertigo, and diplopia. He was drowsy, and there was frequent vomiting of cerebral type. *Attitude.*—He lay curled up on left side with general flexion of limbs. *Eyes.*—Both eyes were deviated to left, there was lateral nystagmus and double early optic neuritis. *Right ear.*—Fœtid otorrhœa; no evidence of disease of mastoid. *Limbs.*—Marked weakness of right arm; slight weakness of both lower limbs; right knee-jerk brisk. *Temperature* subnormal. *Pulse* slow.

11th.—First operation: disease of temporal bone removed. Half an ounce of pus evacuated from anterior part of right lateral lobe of cerebellum.

12th.—Great improvement; no headache, vomiting, or deviation of eyes. Temperature and pulse normal.

20th.—Return of serious symptoms.

27th.—Patient's condition critical. Second operation: blood collection evacuated from posterior part of right lateral lobe of cerebellum.

28th.—Condition much improved.

30th.—Gradual and complete convalescence from this date.

During the illness the breath was foul and the motions very offensive. During convalescence the appetite was ravenous.

The charts of pulse and temperature well illustrate the course of the illness.

Many important questions for discussion arise from a consideration of such a case. The chief of them are as follows:—As to the locality in which abscess secondary to caries of the temporal bone is usually found; the symptoms which may occur in cerebellar abscess, and the cause of the type paralysis; the localising symptoms of abscess of one lateral lobe of the cerebellum; the lesions most likely to be confused with cerebellar abscess; the treatment. Each of these points will be considered in detail.

III. Frequency and Site of Abscess of the Brain secondary to Ear Disease.

A. *As to the Locality in which Abscesses Secondary to Caries of the Temporal Bone are usually found.*

A large proportion of all abscesses of the brain are secondary to disease of the ear or caries of the temporal bone; but it is difficult if not impossible to give the exact numbers, since the earlier records are vitiated by the fact that the ears were not examined in every case either ante or post mortem.

Gowers ('A Manual of Diseases of the Nervous System,' ed. ii, p. 470) states that out of 241 cases, 102, or about 42·5 per cent., were secondary to ear disease. Gull and

Sutton (' A Collection of the Medical Writings of Sir. W. Gull,' New. Syd. Soc., 1894, pp. 65—84) gives 27 out of 76, or about 35·5 per cent. The latter cases are included in Gowers' statistics, so that it may be stated that from 35 to 40 per cent. of all brain abscesses are secondary to disease of the ear.

B. *Relative Frequency of Cerebellar and Temporo-sphenoidal Abscesses Secondary to Ear Disease.*

It has generally been considered that a majority of abscesses of the brain secondary to ear disease are situated in the temporal lobe, and a lesser number in the cerebellum, and Körner in his most recent paper on the subject (' Arch. f. Ohrenheilkunde,' vol. xxix, 1890, p. 16) states that in 100 cases of abscess of the brain secondary to ear disease, sixty-two occurred in the cerebrum and thirty-two in the cerebellum, and six in both cerebrum and cerebellum. That this proportion is not invariably maintained will be seen from the statistics given below, which have been taken from the records of St. Thomas's and the Great Ormond Street Hospitals, and which will be found to differ in some important particulars from those given by Körner.

C. *Statistics of St. Thomas's Hospital.*

During the 29 years 1876 to 1894 (inclusive) twenty-six cases were admitted into St. Thomas's Hospital suffering from abscess of the brain secondary to ear disease. The cases have been most numerous in recent years—five were in the hospital in 1892. The reason for this is probably twofold—firstly, an increase of knowledge has led practitioners much more frequently to suspect the presence of an intra-cranial lesion; and secondly, autopsies are more carefully and methodically conducted.

Temporo-sphenoidal abscess.—In the above twenty-six cases there were nine temporo-sphenoidal and nineteen cerebellar abscesses. In two of them abscesses were found in both situations. The ages of the patients who suffered from temporo-sphenoidal abscesses were 12, 14, 15, 15½, 16, 20, and 26 years; of those who suffered from cerebellar abscess

as well, 7 and 17 years respectively. Four were on the right side, five were on the left; eight of the patients were males and one was a female. The two cases of temporo-sphenoidal and cerebellar abscess had also sinus pyæmia; these were both males. A purulent thrombus was found in one other case (male) in the lateral sinus, but the notes are imperfect and no mention is made of pyæmia. In one case (male) the inferior petrosal sinus was found, at the post mortem, surrounded by pus, but no mention is made of pyæmia.

Cerebellar abscess.—Nineteen cases; two of these were complicated with temporo-sphenoidal abscess. The ages of the patients were: 6, 12, 13, 14, 14, 14, 15, 15, 16, 16, 17, 20, 22, 23, 23, 24 and 37 years. The ages of those complicated with temporo-sphenoidal abscess are mentioned above. Thirteen were males, and six females. In twelve cases the abscess was on the right side; in seven on the left, including the two cases (both males) in which there was temporo-sphenoidal abscess as well. Two of the cases recovered after the operation. In one case two abscesses were opened, one in the anterior and the other in the posterior part of the right lateral lobe, but after many weeks the patient died. Brachial monoplegia is recorded in very few of the cases: but the notes of the earlier cases are defective. In three of the cases typical sinus pyæmia was present; in two the sinus was thrombosed, but not infected, though an extra-dural abscess was present in its neighbourhood.

Up to the present time in this year (November, 1895) only one case of brain abscess (right cerebellar) has been admitted. The patient was a boy æt. 9 years. One abscess was successfully opened, but at the post-mortem examination a second was discovered situated further back in the lateral lobe.

Besides the case published in this paper, one other successful operation for cerebellar abscess has been performed at St. Thomas's, by Mr. Ewen Stabb; his case was remarkable as the patient had rigidity of all four limbs previous to the operation (see Abstract No. 76, p. 209).

In all the above twenty cases there was a history of long-standing otorrhœa, and the duration of the fatal illness without operation varied from seven days to five weeks.

It is interesting to note that there is no record of any case of cerebellar abscess at St. Thomas's Hospital during these 29 years which was not secondary to ear disease.

D. *Statistics of the Hospital for Sick Children, Great Ormond Street.*

During the last thirty-five years six cases of abscess of the brain secondary to ear disease are recorded in the post-mortem notes of the above hospital.

Temporo-sphenoidal abscess.—Two cases (both females). Ages in years: 10 and 11. One was on the left side, and one on the right. (During this period there were six other cases of cerebral abscess unconnected with ear disease, two of which were secondary to empyema.)

Cerebellar abscess.—Four cases (three females, one male). Ages 5, 8, 9, and 10 years. All four were on the right side.

In one case paresis and rigidity of the arm on the side of the disease was noted, and the patient in walking tottered towards the opposite side. At the autopsy two separate abscesses were found in the lateral lobe of the cerebellum, one the size of a bantam's egg having a thick fibrous capsule, with the smaller end pointing backwards; and the second, much smaller and obviously recent, situated behind the old abscess. In another case a puriform thrombus was discovered in the lateral sinus. In one case the clinical history has been lost. In the fourth case at the post mortem the right lateral lobe of the cerebellum was found entirely converted into an abscess-cavity, but there is no clinical record of the state of the limbs. The duration of serious illness was twenty days, twenty-three days, and four months respectively: the patient whose clinical notes have been lost was in the hospital nearly three months.

There is no case of abscess of the cerebellum recorded at Great Ormond Street during these thirty-five years in which ear disease was not present.

In the above 33 cases collected from St. Thomas's and the Great Ormond Street Hospitals, there were 24 cerebellar, and 11 temporo-sphenoidal abscesses. In 2 cases an abscess was present both in the temporo-sphenoidal lobe

and in the cerebellum. In 20 cases the abscess or abscesses were on the right side, and in 13 the abscess was on the left.

These numbers are interesting, since in the first place they do not correspond with the generally accepted statistics made up of figures collected from published cases, on the strength of which Gowers ('Diseases of the Nervous System,' vol. ii, ed. ii, p. 475) states that "abscess from ear disease is twice as frequent in the cerebrum as in the cerebellum;" and in the second place they are in accord with Körner's tables, which show the relation of age to the occurrence of cerebral and cerebellar abscess, and the greater frequency of abscess on the right side than on the left. Körner's[1] tables are as follows:

E. *Table showing Relation of Age to Cerebral and Cerebellar Abscess secondary to Ear disease: taken from* 100 *cases,* 91 *of which were verified post mortem, and* 9 *by operation* (Körner, loc. cit., p. 17).

Age.	Cerebral abscess.	Cerebellar abscess.
0—10	12	2
11—20	13	9
21—30	19	10
31—40	11	3
Over 40	7	5

F. *Table showing Relative Frequency of Cerebral and Cerebellar Abscess on Right and Left sides.*

Seat of abscess.	Total.	Right.	Left.	R. & L.
Cerebrum . . .	62	34	26	2
Cerebellum . . .	32	21	10	1
Cerebrum and cerebellum	6	4	2	0
Totals . . .	100	59	38	3

Of the 32 cases occurring in the cerebellum, a single abscess was found in 28 and more than one in only 4.

In 5 of the 24 cases of cerebellar abscess collected from the records of St. Thomas's and Great Ormond Street, 2 abscesses were noted.

[1] Körner, "Statistische Beiträge zur Kentniss des Otitischen Hirnabscesses," 'Archiv f. Ohrenheilkunde,' vol. xxix, 1890, p. 17; compare also tables given on p. 183, compiled from 100 cases of cerebellar abscess.

IV. Diagnosis of Abscess of Lateral Lobe of Cerebellum.

The symptoms of abscess of the cerebellum are often obscure, and sometimes misleading. The records of the published cases show that in a large number of them an incorrect diagnosis or none at all, was made during life, and in more than one instance an operation has been performed to explore the temporo-sphenoidal lobe when the abscess was in the cerebellum, and operations have even been attempted on the wrong side.

Nothing is more striking in the histories than the general lack of definite symptoms which might lead to a correct localisation of the lesion in cases of cerebellar abscess.

Non-localising Symptoms of Abscess of Brain.—In many cases of abscess of the cerebellum the symptoms are of no value in localisation. Among these may be mentioned headache, vertigo, photophobia, purposeless vomiting, optic neuritis, low temperature, slow pulse, slow respiration, drowsiness,[1] foul breath, constipation, loss of control over the bladder, emaciation, pallor of face, and expressionless countenance, following, as is usually the case, on long-continued otorrhœa, and with a history of sudden onset of illness, with earache, and sometimes shivering.

A. Localising Symptoms of Abscess of Cerebellar Hemisphere.

Gowers[2] mentions as localising signs of cerebellar abscess frequent vomiting, severe occipital headache, marked giddiness, and cerebellar inco-ordination in consequence of pressure on the middle lobe.

In the case under discussion other symptoms were present which so closely resemble the effects produced by removal of one lateral lobe of the cerebellum, that they deserve to be fully considered (cf. table on p. 164). The most important of these are *paresis of the anterior extremity on the same side as the cerebellar lesion, associated with weakness of the lower extremities, increased knee-jerk on the same side as the lesion, and conjugate deviation of the eyes away from the lesion* (see Plate II).

[1] MacEwen writes (loc. cit., p. 134):—"Slow cerebration, mental obscuration, want of sustained attention, gradual diminution of the ability to apply the strength."

[2] 'Diseases of the Nervous System,' 2nd edit., vol. ii, pp. 480, 482.

I. Paralysis of Limbs: Nature, Extent, and probable Causation.—The paralysis of the anterior extremity on the same side as the cerebellar lesion has been explained in various ways:

(*a*) By Luciani as the result of cutting off the reinforcing influence of the lateral lobe of the cerebellum from the opposite cerebral hemisphere. This view is illustrated by the accompanying plate, and appears to us to offer a valid explanation of the phenomenon.[1]

(*b*) As the result of the displacement of the pons by an abscess or tumour of the lateral lobe of the cerebellum against the opposite edge of the tentorium so as to press on the opposite pontine pyramidal tract. This view appears to us untenable, as such pressure could hardly fail to also affect the pyramidal tract on the side of the abscess; and, moreover, under the conditions mentioned, deviation of the eyes, if present, would be towards the side of the abscess.

(*c*) By MacEwen,[2] who says that the paralysis on the same side is due to pressure on the medulla below the decussation of the pyramidal tract by that part of the cerebellum which passes through and is below the foramen. He writes: "The paralysis in cerebellar cases may be unilateral and on the same side as the abscess, provided the medulla be affected at a sufficiently low level. It is well to remember that the normal cerebellum passes beyond the foramen magnum and under pressure from abscess would probably extend further into spinal canal so that upper part of cord may actually be pressed on." In his atlas of head sections, plates 36 and 37, the normal cerebellum is shown posterior to and on each side of the medulla at the level of the foramen magnum and at the level of the arch of the atlas, so that it is conceivable that pressure might be exercised on the medulla by the cerebellum below the decussation.[3]

[1] In relation to Luciani's view it is interesting to refer to Fleming's case ('Brain,' vol. xi, p. 126). Defect in development of the right lobe of the cerebellum was associated with diminution of the opposite cerebral hemisphere. Compare also case of defective development of the right lateral lobe of the cerebellum in a cat which during life had paresis of both posterior extremities and of the right anterior extremity ('Brain,' pt. lxix, 1895, p. 159, and cf. a note by Prof. Sherrington, p. 158).

[2] 'Pyogenic Infective Diseases of the Brain and Spinal Cord,' 1893, p. 195.

[3] The same thing is shown in one of Bourgery's plates (see 'Traité complet de l'Anatomie de l'homme,' tome iii, pl. 26.

This explanation, even if it affords a solution of the paresis in some cases, does not appear to account for it in our patient. In support of which view we offer the following observations.

(i) In our patient, if the paresis of the right arm was due to pressure on the cord below the decussation, it should have been relieved shortly after the evacuation of the pus. On the contrary, it lasted for several weeks and reached its acme during the convalescence of the patient.

(ii) The effect of removing one lateral lobe of the cerebellum in monkeys is to cause paresis of the limbs on the same side. This cannot be the result of pressure on the cord below the decussation.

(iii) The removal of a tumour of the lateral lobe of the cerebellum by one of us was followed (under circumstances in which the intracranial pressure, local and general, was certainly not *plus* and was probably *minus*) by paresis of the arm on the same side which lasted for some months.

(iv) In operating on a man for the relief of severe symptoms of brain tumour, one of us, for reasons which need not be stated, removed the bone over the left lateral lobe of the cerebellum. No tumour was found in this situation, but the intracranial pressure was so great that during the next few days the healthy left lateral lobe of the cerebellum was pushed through the cut edges of the dura and sloughed off. The patient recovered; was completely relieved of his headache and vomiting, but for some months had marked paresis of his left arm, which was in fact for a long time quite useless.

(*d*) It may be pointed out that the onward extension of inflammation from the abscess would involve the pontine pyramidal tract on the same side and cause paralysis of the limbs of the opposite side of the body.

II. Muscular rigidity or convulsions may affect the limbs on the same side as the cerebellar lesion. In Drummond and Hume's case, in which the abscess was in the right lateral lobe, the clinical facts were as follows :—" Right-sided paralysis. Right-sided convulsions. Every hour and sometimes more frequently the fit returned. The spasm commenced in the face and almost immediately extended to the

DESCRIPTION OF PLATE II,

Illustrating Dr. Acland's and Mr. Ballance's Case of Cerebellar Abscess secondary to Otitis Media Suppurativa treated successfully by Operation.

Schema (sketched with the kind assistance of Professor Sherrington, F.R.S.) illustrative of Luciani's explanation of the weakness of the limbs in lesions of the lateral lobe of the cerebellum.

In the right hemisphere of the cerebellum the yellow mass represents the abscess cutting off the reinforcing influence, which is shown passing from the cortex of the *right* cerebellar hemisphere along the path A A to the cortex of the *left* cerebral hemisphere. This path passes probably through two ganglia, but for the sake of simplicity only one site of ganglionic linkage (B) is illustrated.

The absence of this reinforcing influence then makes itself felt *viâ* the pyramidal tract. Most of this tract is seen to decussate in the medulla, descend to the brachial and lumbar enlargements of the spinal cord, and reach the motor cells for the arm and leg of the same side as the cerebellar lesion.

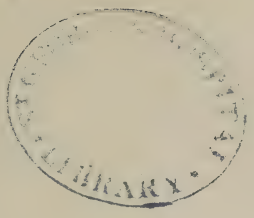
Absence of the reinforcing influence of the *right* cerebellar hemisphere will, therefore, weaken the limbs on the *right* side. As a clinical fact the *upper* extremity shows this weakness in greater measure than the lower. An evidence of the impaired cerebral influence over the lower limb is afforded by the briskness of the *right* knee-jerk, *i. e.* the knee-jerk on the *same* side as the cerebellar lesion.

It is to be remembered further that some of the pyramidal fibres do not cross (uncrossed pyramidal tract), but descend to the arm and leg of the side *opposite* to the cerebellar lesion; hence this affords some explanation of the weakness, recorded in these cases, of *both* lower limbs.

Again, the loss of the *right* cerebellar reinforcement causes the eyeballs to be directed away from the side of the cerebellar lesion, *i. e.* towards the *left*. This deviation of the eyeballs to the left is produced by the weakness of the muscles (right external rectus; and left internal rectus), which may be considered as belonging functionally to the *same* side as the lesion; the ocular paresis is therefore comparable with that which obtains in the muscles of the limbs on the *same* side as the lesion.

The rapid return movement in the nystagmus was in this case towards the right, *i. e.* towards the side of the lesion. This may be explained by a sudden attempt at correction on the primary swing due to impaired *right* cerebellar action becoming extreme.

Note.—In criticising the Schema it should be remembered that it is only a diagram, and that with regard to the innervation of the muscles of the eyeball, the path from the cerebral hemisphere crosses the middle line to the sixth nucleus.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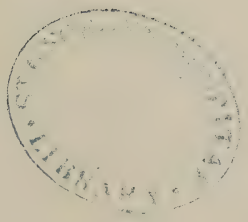
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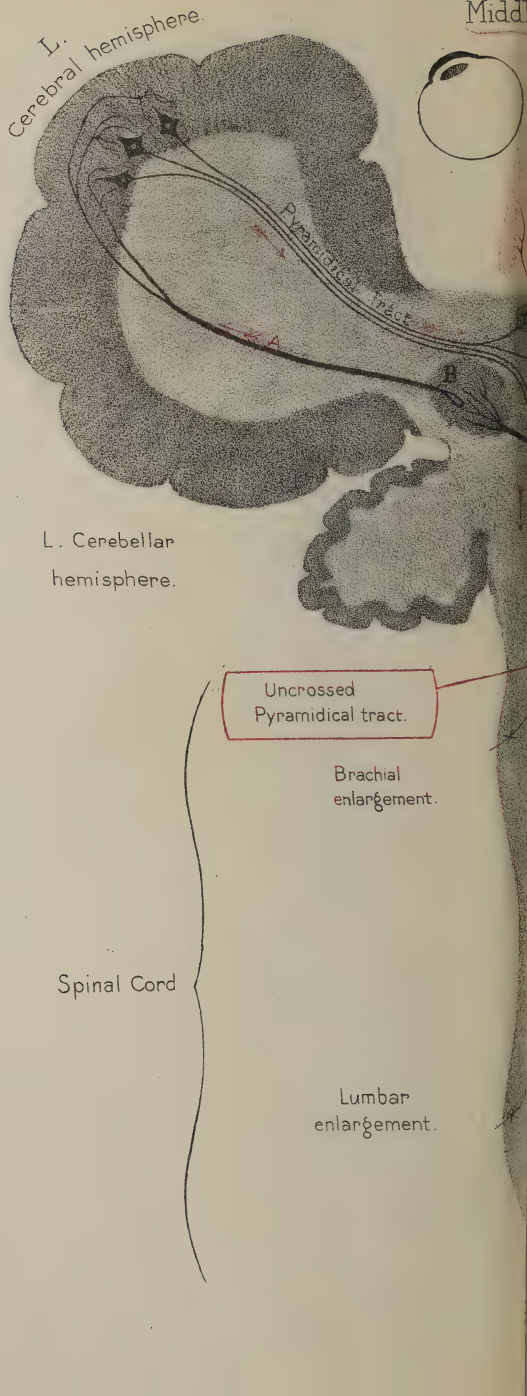
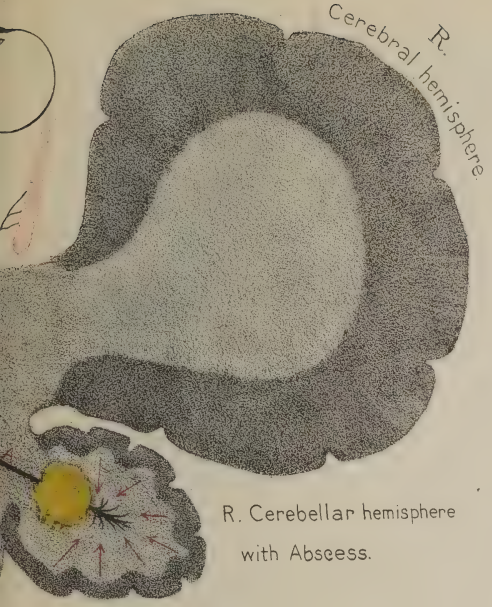
Plate II.


L.
Cerebral hemisphere.
Middl
Pyramidical tract.
L. Cerebellar
hemisphere.
Uncrossed
Pyramidical tract.
Brachial
enlargement.
Spinal Cord
Lumbar
enlargement.



R. Cerebellar hemisphere
with Abscess.

Crossed
Pyramidical tract.

Upper extremity.

Lower extremity
and
Knee jerk.

Daniel & Hill Litr

arm and occasionally to the leg, but remained limited to the right side" (v. Abstract No. 68, p. 205).

III. Conjugate deviation of the eyes to opposite side.—In one case observed by us at St. Thomas's Hospital, in an early stage of the illness there was deficient movement of both eyes towards the left. In a later stage there was extreme conjugate deviation of the eyes to the right. At the autopsy two abscess cavities were found in the left lobe of the cerebellum; they had both been opened and drained during life. Many days had elapsed between the two operations. This conjugate deviation of the eyes would seem to be explicable on the same grounds as the palsy of the limbs (see Plate II, illustrating Luciani's views). A paralysing lesion in the tegmental region of the pons at or above the nucleus of the sixth nerve causes a loss of the movement of both eyes towards that side, but pressure on the sixth nucleus would not occur in the experimental removal of the lateral lobe of the cerebellum, and the pontine explanation of the deviation of the eyes in consequence of pressure on the pyramid would require also palsy of the limbs of the opposite side.

As regards the combination of symptoms mentioned above as occurring in the case of Albert Jones, *i.e.* "Paresis of both hind limbs; paresis of the anterior limb on the same side; and conjugate deviation of eyes towards the opposite side," Risien Russell,[1] with whom we agree, writes: "No other lesion of the cerebellum but one of the right lateral lobe of the organ could be responsible for this combination of symptoms, for had the cerebellar lesion been on the left side causing the motor paresis on the right side by pressure on the pyramid, the eyes, if deviated, would have been directed to the right and not to the left. Another instructive case in this connection is one recorded by Vulpian, in which a tuberculous tumour of the right side of the cerebellum was responsible for paresis of the right extremities together with turning of the eyes to the left."

IV. Lateral nystagmus often seems associated (clinically and experimentally) with lesions of the lateral lobe of the cerebellum, while rotatory nystagmus points to involvement

[1] 'Brit. Med. Journ.,' 1895, vol. i, p. 1081.

of the middle lobe. Nystagmus, however, occurs in disease of so many other parts of the brain which involve weakness of the ocular muscles that this sign is only of value when associated with other type symptoms. In lesions of the lateral lobe the jerks are towards the side of the lesion.

V. The tendon reflexes. Discussion as to the site of abscess when the type paralysis is present.—The knee-jerk on the same side as the cerebellar lesion is exaggerated. With regard to this point Prof. Sherrington writes to us, "The increased jerk on the side of the lesion is exactly what I should expect; there is spinal exaltation (or increased *spinal* tonus) on that side, the cerebral tonus on that side being low, and restraint is thus removed from the local action (*spinal* tonus) of the cord. The knee-jerk is exalted when the cerebral tonus is low, owing to loss of reinforcement of the cerebral activity by the injury to the opposite cerebellar hemisphere that should be playing into it. Luciani's observation of atonia would therefore lead us to expect—as Russell found—an exaggerated knee-jerk. I believe myself the knee-jerk will always vary inversely with the cerebello-cerebral tonus, and directly with the spinal tonus. Normal tonus, *i. e.* the normal degree of more or less steady activity of the motor centres in the cord, is the reflex outcome of two great groups of factors playing into them, *i. e.* cerebello-cerebral and spinal, and these are more or less antagonistic and balance; in other words, when A is diminished the field is left freer for B, and *vice versâ*. It seems like two pressure systems pouring into a common reservoir with one outflow pipe (*i. e.* the motor nerves); if cistern A is raised, or the head of water in it raised, it will occupy with its discharging stream *more* of the outflow pipe than when it is only at the same level as B.

"You will smile and say this is theory simple; the facts are, I think, really enough to warrant a simple generalisation of this kind."

From what has been said it is clear that both clinical and experimental pathology agree that paralysis may follow interference with the lateral lobe of the cerebellum. The question naturally arises—Is the type paralysis present irrespective of the site of the lesion in the lateral lobe? At

present no positive answer can be given, but we imagine that the tract of fibres carrying the reinforcing influence to the opposite cerebral hemisphere would be most likely to be severed by an abscess either occupying the anterior and inner part of the lateral lobe, or destroying nearly the whole of the lateral lobe. If Luciani's explanation of the paralysis be correct, severance of a bundle or bundles of fibres running into and through the superior peduncle must take place, and an abscess occupying the anterior and outer part of the lateral lobe would not do this. Such an abscess would not involve the nucleus dentatus [1] or the bundle of fibres (intraciliar) which takes origin from its grey matter, and after decussating, appears to end in the red nucleus of the opposite side.[2]

The type paralysis, if Luciani's view is true, would also be present if it were possible to strip off the cortical grey matter from the cerebellar hemisphere. As bearing on this point, it is interesting to note Risien Russell's case of "defective development of the cerebellum in a puppy" which had during life symptoms of cerebellar defect (see 'Brain,' part lxxii, 1895, p. 523). The corpus dentatum was intact on both sides, but in a large area of the cortex of the lateral lobes the cells of Purkinje were completely absent. Compare also Vulpian's case[3] of a woman with marked inco-ordination of movements in whom after death all the grey matter of the cerebellum was found to be atrophied, and all the nerve-cells had disappeared. The corpora dentata were found intact. At a recent meeting of

[1] The fibres of the superior peduncle pass almost entirely out of the dentate nucleus (intraciliar fibres), but some curve round the outer side of this without passing into it (extraciliar). Probably many of the intraciliar fibres are connected with the cells of the dentate nucleus, but others pass in bundles through the grey lamina which composes it, and appear to go eventually to the superficial grey matter which composes it ('Quain's Anatomy,' 10th edition, vol. iii, pt. 1, p. 85).

[2] See Risien Russell's paper, 'Phil. Trans.,' 1895, "Degenerations consequent on Experimental Lesions of the Cerebellum." The degenerated fibres have been traced beyond the red nucleus to the optic thalamus, but not to the cerebral cortex. Marchi had traced in animals operated on by Luciani degenerated fibres as far as the optic thalamus, but not beyond (see 'Quain,' vol. iii, pt 1, p. 93).

[3] 'Leçons sur la Physiologie générale et comparée du Système Nerveux,' 1866, p. 629.

the Neurological Society Dr. Colman showed a cat with cerebellar ataxy. There was weakness of all four limbs, most marked in the hind limbs, and marked ataxy on walking. There was also general tremor when the cat stood quietly. The knee-jerks were active. There was no nystagmus. Post mortem the lateral lobes of the cerebellum were small, but equal in size. Microscopically the folia were thin, and in both lateral lobes the cells of Purkinje were scarcely to be found. In the middle lobe they were abundant and stained normally. The cells of the corpus dentatum appeared normal.

Clinical evidence seems to favour the view that the nucleus dentatus or the bundle of fibres passing from it upwards must be involved by the abscess when the type paralysis is present.

The following facts lend support to this hypothesis:

(*a*) In a case of Ogle's there was loss of power in the left arm and leg. Report of autopsy: "In the left lobe of the cerebellum was a cavity the size of a walnut, having a shiny smooth surface, reaching almost to the fourth ventricle. The corpus dentatum on this side was absent" ('Brit. and For. Med.-Chir. Rev.,' 1865).

(*b*) In a case of Vulpian's a tuberculous tumour the size of a hen's egg occupied the right lateral lobe of the cerebellum and caused right-sided paralysis ('Compt. Rend. Soc. Biol.,' 1861).

(*c*) In the case of Albert Jones a considerable portion of the cerebellar hemisphere must have been destroyed; the abscess was situated at the anterior and inner part.

(*d*) In the case of the cerebellar tumour removed by one of us and which had caused brachial monoplegia on the same side, the site of the tumour was the inner and anterior part of the lateral lobe.

(*e*) In MacEwen's case (loc. cit., p. 199) a left cerebellar abscess containing five ounces of pus caused paralysis and rigidity of the left arm.

(*f*) In Drummond and Hume's case ('Lancet,' 1894, vol. ii, p. 190) "A large abscess holding an ounce of pus was found at the right lateral lobe of the cerebellum about *three quarters of an inch from the medulla.*" During life right-sided paralysis and convulsions were observed.

(*g*) Case of a woman, æt. 24, at St. Thomas's some years ago.

Note from Clinical Record.—"Right ear diseased. Right arm markedly weak. Patient resents interference. On raising lids forcibly, wide divergent squint:[1] left eye being the chief offender. After lapse of a few minutes optic axes become parallel and diplopia disappears."

Autopsy.—"On making a section through the right lobe of the cerebellum a cavity the size of a greengage was seen. It was filled with fetid green pus, and its wall was thick and velvety. This abscess was situated in the anterior and outer part of the lobe, and was not recent. *Further inwards unconnected with this abscess was another recent abscess the size of a marble.*"

(*h*) St. Thomas's Hospital Museum (No. 2012).—In the right hemisphere of the cerebellum there is a very large cyst over which the cerebellar substance is stretched and atrophied. The inner part of the lobe has been destroyed by the cyst. "From a man aged 22 years, who for three or four years before death had noticed loss of power in the right arm and leg. His symptoms on admission were headache, optic neuritis, vomiting, drowsiness, &c."

(*i*) In a case of cerebellar tumour growing from the right lateral lobe of the cerebellum, which projected into the fourth ventricle and pressed on the right superior peduncle, there was marked rigidity of the right arm and leg. It was found impracticable to remove the tumour during life, though the operation was attempted recently by one of us.

VI. Rotation.—A tendency to face towards the side of the lesion in walking.—With regard to the apparent discrepancies between Luciani and Russell and Ferrier, as to the direction of rotation resulting from unilateral lesions of the cerebellum, it should be noted that Luciani and Russell describe the direction of the rotation as it occurs in the upper or dorsal segment of a quadruped standing on all-fours, and seen from above and behind. According to them rotation from right to left is that which occurs if the animal lies first on its left side, then on his back, bringing its legs over from right to left, the legs on the right side leading.

[1] Query Russell's "skew deviation."

This rotation is that which would be described in man *when standing erect* as *rotation from left to right,* since the result is to bring the left shoulder forward.

The confusion is caused by the fact that the direction of rotation in man is described with reference to his anterior or ventral segment, in the quadruped with reference to the superior or dorsal segment. So that what is called rotation from right to left in the dog by Luciani and Russell is precisely the same as that which is called rotation from left to right by Ferrier, and in this paper.

The facts recorded by each observer are identical. The manner of recording them has seemed to cause irreconcilable differences of opinion. On this point Prof. Sherrington writes: "As to the rotation, I think its direction should be described in the way most applicable to man. Ferrier worked with the monkey, and no doubt had clinical cases in his mind."

VII. Staggering or cerebellar gait, and a tendency to fall towards the side opposite to the lesion.—It should, however, be remembered that there are two factors which may cause the patient to fall towards the *same* side.

(i) If the paralysis of the hind limb on the same side is marked. (This is so in monkeys—Russell.)

(ii) If there is implication of the auditory nerve. Since in animals intracranial section of the auditory nerve results in falling towards the same side as the lesion.[1]

VIII. Attitude assumed by patient in bed.—A tendency to lie curled up in bed on the side opposite the lesion, with the limbs flexed, and the side of face corresponding to the lesion uppermost.[2]

This attitude is assumed by monkeys after removal of one lateral lobe of the cerebellum (Risien Russell), and has been

[1] "Researches into the Functions of the Cerebellum," Risien Russell, 'Phil. Trans.,' vol. clxxxv, 1894, p. 855. [In Dr. Sharkey's case of tumour of the auditory nerve ('Brain,' vol. xi, p. 97) the patient had no tendency to fall towards the side of the lesion.]

[2] In the report of Case 70, 'Lancet,' 1894, vol. ii, p. 1338, the patient is stated to have lain curled up on his left side: *the side of the abscess.* Dr. Deanesly informs us that this is a clerical error, he really lay curled up on his right side as may be seen from the account of the operation, previous to which he had lain "exclusively on the right side."

a prominent symptom in other cases; see Abstracts Nos. 35, 54, 70, 73, and 77.

IX. No loss of sensation.—Prof. Sherrington writes to us "Perhaps the most valuable feature in your case is, from my point of view (*i. e.* the physiological), the observations on sensation; it is most difficult to judge of sensation in animals and by laboratory experiment; and the opposing experimental results on the point would have probably long remained unless this clinical opportunity had arisen for checking them."

B. Table contrasting results of Experimental Removal of One Lateral Lobe of the Cerebellum with Clinical Observations on the Case of Albert Jones.

I. After Luciani.	II. After Ferrier.	III. After Risien Russell.	IV. Albert Jones.
1. Paresis mainly (if not exclusively) on same side as lesion if this is unilateral	1. Not proven that paresis results	1. Paresis of limbs on same side and posterior extremity on opposite side	1. Paresis same as III, but patient not conscious of loss of power.
2. Astasia or unsteadiness of muscles with fine tremors apart from muscular exertion	2. The same as I	2. Inco-ordination, chiefly on the same side as the lesion	2. Inco-ordination on same side as lesion.
3. Instability on volitional effort	3. The same as I	3. — —	3. The same as I and II.
4. Oscillation on volitional exertion, simulating disseminated sclerosis	4. The same as I	4. — —	4. — —
5. Atonia on side of lesion, tendon reaction not noted	5. Knee-jerk not diminished, after a time increased	5. Rigidity, most marked in anterior extremity on side of lesion; knee-jerk increased on the side of the lesion	5. No rigidity; knee-jerk increased on the side of the lesion.
6. Deviation of eyes *away* from the side of the lesion	6. No constant deviation	6. The eye on the side opposite lesion deviated outwards, *i.e.* away from lesion	6. Both eyes deviated away from the lesion.
7. — —	7. — —	7. Lateral nystagmus, the jerks being towards the side of the lesion	7. The same as III.
8. Rotation away from side of lesion (see p. 161)	8. Rotation towards side of lesion (see p. 161)	8. Rotation away from side of lesion (see p. 161)	8. Rotation. Body tends to face towards side of lesion, vertigo with sense of rotation in same direction (see p. 161).
9. — —	9. — —	9. The side of face on side of lesion directed upwards	9. Same as III.
10. No alteration in psychical condition	10. The same as I	10. Same as I and II	10. Same as I, II, and III.
11. No alteration in cutaneous sensibility	11. Same as I	11. Sensibility blunted on paretic limbs	11. No loss of sensibility.
12. No alteration in muscular sense	12. Same as I	12. Same as I and II	12. Same as I, II, and III.
13. No alteration in sexual instinct	13. Same as I	13. Same as I and II	13. Same as I, II, and III.

The above table has been compiled from the writings of (1) Luciani (Luigi), 'Das Kleinhirn,' Leipzig, 1893; (2) Ferrier (D.), Presidential Address to the Neurological Society, 'Brain,' part i, 1894, p. 1; (3) Risien Russell, loc. cit. (v, p. 162).

c. **Localizing Symptoms of Abscess of Temporo-sphenoidal Lobe.**

Temporo-sphenoidal abscess is so frequent a result of ear disease that it is often a matter of great importance to be able to differentiate between an abscess in that locality and one in the cerebellum. Attention should mainly be directed to the following points:

I. Paralysis of face and limbs.—Paralysis in temporo-sphenoidal abscess, if it occurs, is on the side of the body opposite to the lesion. It may be—

(*a*) Of the cortical type; the face being first affected, and then the arm and leg.

(*b*) Of the internal capsule type; the sequence of paralysis being reversed, and the parts involved being in the order—leg, arm, face.

In Hulke's case ('Lancet,' 1886, vol. ii, p. 3) of right temporo-sphenoidal abscess, there was a dilated right inactive pupil and weakness and spasm of the left arm.

In a case of left temporo-sphenoidal abscess at Great Ormond Street, convulsions of the right arm and leg were observed.

In another case at the same hospital, the abscess being in the right temporo-sphenoidal lobe, convulsions of the left side occurred, and the right pupil was large and stabile.

In Stephen Paget's case ('Clin. Soc. Trans.,' vol. xxiv, 1891, p. 192) of left temporo-sphenoidal abscess, the symptoms were paresis of the right side of face and right arm, aphasia, left optic neuritis, and the left pupil was dilated.

The following are four of MacEwen's cases (loc. cit.):

Page 168. *Right temporo-sphenoidal abscess.*—Left face and arm paralysed. Right pupil large and sluggish.

Page 171. *Right temporo-sphenoidal abscess.*—Left side of face weak. Both pupils sluggish.

Page 174. *Left temporo-sphenoidal abscess.*—Right limbs flaccid. Left pupil dilated and fixed.

Page 177. *Left temporo-sphenoidal abscess.*—Right facial and brachial paralysis; left pupil fixed and dilated. Muscles supplied by left third nerve paralysed.

We have been unable to find a case certainly indicating pressure on the internal capsule. Such pressure may un-

doubtedly occur. Faulty histories, imperfect observation, and the fact that patients are often seen first late in the illness, when stupor and hemiplegia are pronounced, offer some explanation. Cortical paralysis appears to be more common (from the histories of the cases narrated) than capsular.

II. Pupillary phenomena.—*A stabile pupil,* small or large, on the same side as the abscess.

In Gowers and Barker's case ('Brit. Med. Journ.,' 1886, vol. ii, p. 1154) of right temporo-sphenoidal abscess, there was a dilated and sluggish right pupil and right optic neuritis.

In MacEwen's case (loc. cit. p. 162) of right temporo-sphenoidal abscess there was right optic neuritis and a dilated and sluggish right pupil. Before the second operation the left arm and left side of face became paralysed.

III. Paralysis of the third nerve on the same side as the abscess.

In Greenfield's case ('Brit. Med. Journ.,' vol. i, 1887, p. 317) of left temporo-sphenoidal abscess the symptoms were: a dilated inactive left pupil, paralysis of the left third nerve, sluggish speech, and loss of memory.

IV. Anæsthesia and hemianopsia.—When the paralysis is due to pressure on the posterior part of the internal capsule, it is likely that the sensory radiation will suffer, and that *anæsthesia* of the opposite side of the body will be present more or less, and possibly also *hemianopsia* from involvement of the optic radiation. When the paralysis is due to involvement of the cortex the so-called *cortical anæsthesia* might be present, but its discovery would probably be difficult in consequence of the mental state of the patient.

In Mill's case ('Archives of Medicine,' vol. viii, 1882) of abscess of the right temporo-sphenoidal lobe, the symptoms were spasm of the left arm, palsy of the left arm and leg, partial left *hemianæsthesia,* a dilated right pupil, tinnitus aurium and deafness of the left ear.

In Schede's case, reported by Truckenbrod ('Archives of Otology,' vol. xv, 1886, p. 176), of left temporo-sphenoidal abscess the symptoms were: paresis of the right side of the face, a "high degree of aphasia," the monosyllables "yes" and "no" being employed without proper reference to the questions asked, also *hemianopsia,* the halves of the retinæ

on the same side as the abscess being affected. "The abscess was probably the size of an orange, and certainly involved the second temporal convolution."

In Mackay's case of tumour ('Brain,' part lxxi, p. 275), the right lower temporal convolutions were destroyed, and there was loss of sensation on the left side. He connects the anæsthesia with the cortical lesions, though in the figure showing a horizontal section the tumour seems to be very close to the posterior part of the internal capsule.

V. Deafness of the opposite or healthy ear due to involvement of the posterior part of the superior temporo-sphenoidal convolution.

In a case of right temporo-sphenoidal abscess at St. Thomas's Hospital there was paralysis of the left arm and leg, *deafness of the left ear* and the right pupil was stabile. At the autopsy an abscess was found the size of a Tangerine orange, and the roof of the tympanum was perforated.

Compare also Mill's case (loc. cit.).

VI. Aphasia.—If the abscess is on the *left side, aphasia* may be a symptom.

(*a*) *Motor* if pressure is exerted on the lower end of the ascending frontal and posterior end of the third frontal convolutions.

(*b*) *Sensory* if the abscess involves the posterior end of the superior temporo-sphenoidal convolution and the angular gyrus.

In MacEwen's case (loc. cit., p. 203) there was "*word deafness and psychical blindness.*" "The abscess involved the posterior end of the first temporal convolution along with the adjacent angular gyrus."

In Ferrier and Horsley's case ('Brit. Med. Journ.,' 1888, vol. i, p. 530) of left temporo-sphenoidal abscess the symptoms were slight right facial palsy, *ataxic speech, word deafness,* and the grasp of the right hand was weaker than the left.

In MacEwen's case (loc. cit., p. 117) the abscess being in the left temporo-sphenoidal lobe, the symptoms were *aphasia,* slight paresis of the left ocular muscles, and weakness of the movements of the right arm, leg, and face.

VII. The dream state.—In a case under our care the patient was quite unconscious of having been removed to the hospital,

and repeated exactly the same words as when she was in bed at home. She lay quietly on her side with the limbs flexed, occasionally moaning, and taking no notice of anything around her. She could be roused with difficulty, and she then sat up in bed with a vacant expression of countenance, the eyes staring straight in front of her, and being apparently conscious of her surroundings, she said slowly, "Am I dying?" "Where am I?" Then she sank back on the pillow until again roused, when the same result followed, and the same words were repeated. The abscess was in the left temporo-sphenoidal lobe.

In MacEwen's case (loc. cit., p. 161) the patient was in a state which he describes as *somnambulistic*. The other symptoms were "stabile mydriasis of the left pupil, paralysis of the left third nerve, paralysis of the right side of the face and right arm. The abscess was in the left temporo-sphenoidal lobe."

Compare Hughlings Jackson's case ('Brain,' 1890, p. 346) of "dream state" in a patient with a tumour of the anterior part of the right temporo-sphenoidal lobe. "She would stand with her eyes fixed and directed forwards for a few moments, and then say 'What a horrible smell.'"

V. Further Points in Differential Diagnosis between Cerebellar and Temporo-sphenoidal Abscess.

1. Attitude assumed in bed.—That in temporo-sphenoidal abscess the patient tends to lie on the side, with the limbs flexed, and the *side of face corresponding to side of lesion against the pillow.*

In cerebellar abscess, as has been noted above, the patient tends to lie on the side, with the limbs flexed, and the *side of face corresponding to side of lesion uppermost.*

These attitudes we have observed in patients.

2. Frequent depression of lower jaw (yawning, gaping).—This symptom we have observed in inflammatory lesions and tumours of the brain below the tentorium.

3. Tenderness on palpation or percussion is not necessarily over the seat of abscess. In Hulke's case ('Lancet,' 1886, vol. ii, p. 3) the trephine was applied over a very tender spot in the temporal region; the abscess was in the cere-

bellum ; so that this sign may be of little value. It should be remembered, too, that in chronic suppurative affections of the tympano-antral cavities it not seldom happens that a crescentic area of the temporal region above the pinna is extremely hyperæsthetic. In one case observed by us there was marked tenderness just behind the posterior border of the mastoid ; the abscess was subsequently evacuated from the anterior and outer part of the lateral lobe of the cerebellum. Pain on pressure over the site of the abscess will obviously be present when there are external signs—œdema, redness, swelling—over the position of the abscess. These signs were present in Schede's case (loc. cit.), and in Schondorff's ('Monatsschrift für Ohrenheilkunde,' 1885). In the latter a fistula was present, and the abscess was already discharging externally. In both these cases the abscess was in the temporo-sphenoidal lobe. **Headache.**—The site of headache, *e. g.* occipital or frontal, does not aid in localisation, but *fixed* pain in the region of the abscess has been observed.

4. Differential cranial percussion note.—In cerebellar abscess and tumour the lateral ventricles often become over-distended with fluid. MacEwen (loc. cit., p. 148) states that "the percussion note in these circumstances over the pterion is markedly altered, the resonance being greatly increased."

We have tried this method on several occasions, but have not at present succeeded in satisfying ourselves of its value. In a case of abscess whose location is obscure, this plan of MacEwen's should be tried.

5. Examination with the speculum may show that pus is coming from the attic, in which case it is likely that the introduction of a probe may determine the presence of an osseous erosion of the tegmen tympani. Caries in this situation would make for a diagnosis of abscess in the middle fossa. In very rare cases the amount of pus coming through the meatus might be larger than could fairly be expected to come from disease of the tympano-antral cavities, and might suggest that a collection of pus under dura mater or in substance of brain was discharging in this way. Spontaneous discharge of a temporo-sphenoidal abscess through the meatus has been known, and spontaneous discharge of a

cerebellar abscess has occurred through a fistula in the mastoid region, the bone being extensively diseased.[1]

6. During the toilette of the mastoid by the Stacke operation (see note, p. 176) information may be gleaned of the probable site of the abscess. Osseous erosions into either the middle or posterior fossa of the skull may be found and followed. The tegmen antri and the tegmen tympani must be carefully examined, for if they are diseased the middle fossa may be involved. If the bone disease has extended to the posterior fossa, a subdural abscess may be evacuated in the sigmoid groove, and the probability will be increased that the abscess is beneath the tentorium. If the erosion has extended into the petrous bone so as to involve the cavities of the internal ear, a subdural abscess may form on the posterior surface of the bone external to the internal auditory meatus, or by the escape of pus along the internal auditory meatus. In either case cerebellar abscess would be more likely to be present than abscess in the temporal lobe. Extradural collections of pus on the posterior surface of the petrous bone may be tapped by the use of a probe bent in a special way (see Ballance on "Lateral Sinus Pyæmia," 'Med. Soc. Trans.,' vol. xiii, 1890, p. 354, fig. 2).

7. Optic neuritis is not of importance in localising the site of the abscess.[2] It is possibly more common in cerebellar than in temporo-sphenoidal abscess (see cases collected by W. Edmunds[3]).

8. McBride's sign ('Edin. Med. Journal,' 1887, p. 996).—McBride suggests that if a tuning-fork cannot be heard on the diseased side, it is probable that caries, having destroyed the internal ear, has reached the posterior surface of the petrous bone, and that under such circumstances it is likely that the abscess is cerebellar rather than temporo-sphenoidal.

[1] Cf. Schwartze u. Braun (E.), 'Archiv f. Ohrenheilkunde,' Bd. xxix, 1890, p. 164. In this case the mastoid antrum had been opened (*vide* Case No. 49, p. 197).

[2] It should be noted that optic neuritis may be expected to be more intense on the side of the abscess than on the other, and that it may be present ONLY on the same side as the abscess.

[3] "Differential Diagnosis of Intra-cranial Affections Secondary to Disease of Ear," 'St. Thomas's Hospital Reports,' vol. xvi, pp. 249 and 250.

Cases are recorded, however, in which bone conduction has been present and the abscess was in the cerebellum, so it is important to remember that McBride's sign is by no means an unfailing test of the site of the abscess.

VI. Diagnosis in Complicated Cases.

We have so far endeavoured to indicate the means by which a diagnosis may be made in uncomplicated cases of cerebellar abscess. In complicated cases the problem is far more difficult.

(*a*) *Cerebellar abscess complicated with temporo-sphenoidal abscess.*—When the patient first comes under observation the rapid increase or larger size of one of the abscesses might possibly give clear indications of its site by type symptoms. After successfully draining the first abscess, other symptoms might arise pointing to the formation of pus in another situation, with sufficient clearness to make the diagnosis and treatment of the second abscess possible. Unless, however, one abscess formed after the other and the case was most carefully observed from day to day, successful treatment would be well-nigh hopeless. The simultaneous development of abscesses in two situations in the brain must confuse the symptoms and probably render the diagnosis impossible.

(*b*) *Cerebellar abscess and meningitis.*—In meningitis the temperature may be high and continuous, the pulse generally quick, delirium and optic neuritis occur early, pain in the head is severe as in the first stage of abscess; retraction of the head and rigidity of the neck may be expected in meningitis of the posterior fossa, involvement of cranial nerves is common, causing for example squint, irregular respiration, &c. The symptoms of abscess will be modified or controlled by these signs of meningitis according as the abscess or the meningitis is the most prominent disease.

(*c*) *Cerebellar abscess and lateral sinus pyæmia.*—Pyæmia may be diagnosed by an oscillating temperature, rigors, sweating, quick pulse, &c., but as the abscess increases in size the temperature may fall and the pulse become slow (cf. Case 53, p. 199). In uncomplicated pyæmia the mental state may remain clear up to the time of death.

VII. Diagnosis of Abscess in Rare Situations below the Tentorium.

(*a*) *Abscess of the middle lobe of the cerebellum.*—Septic softening may extend from an abscess of the lateral to the middle lobe, or an abscess may form in this lobe independently. The symptoms that may be looked for are—extreme cerebellar inco-ordination, rotatory nystagmus or nystagmus in every direction, and paresis of the trunk muscles, as shown by testing the recti abdominales and the erectores spinæ muscles. These symptoms, with agonising headache, vertigo, and frequent vomiting, were present in a case of tumour involving the middle lobe which was recently operated on by one of us.

(*b*) *Abscess of the pons.*—This may occur as a primary affection or in consequence of inflammatory extension from other parts. The symptoms to be expected are—various paralyses involving both eyes, both sides of the face, and the limbs of both sides of the body; the most common combination is paralysis on one side of the face and of the limbs on the opposite, the face being paralysed on the side of the lesion; sensory defects, difficulty in swallowing, possibly pin-head pupils; and finally death by arrest of respiration.

(*c*) *Abscess of the flocculus.*—Such a case (right flocculus) was operated on by one of us (see 'Clin. Journ.,' 1893, p. 362). The symptoms were cerebellar gait, vertigo, vertical and lateral nystagmus, *involvement of the right fifth, sixth, seventh, and eighth* cranial nerves, double optic neuritis, epistaxis, &c. A similar destruction of cranial nerves occurred in a case of tumour of the right flocculus which was successfully operated on by one of us. At the autopsy on the abscess case the track of the pus-seeker could be followed by a slight line of ecchymosis up to the boundary of the abscess.

VIII. Diagnosis of Cerebellar Abscess from Tubercular Meningitis.

The symptoms of tubercular meningitis vary so greatly that diagnosis is sometimes most difficult, especially in childhood. When associated with chronic purulent otorrhœa the

disease has been mistaken, in our experience, for brain abscess, and operative treatment undertaken, which of course failed in its object. It is important to remember how often otitis in children is tubercular, and that symptoms of intracranial disease simulating brain abscess may arise either from the presence of a tubercular mass or masses in the brain, or from tubercular meningitis. We have experienced this difficulty in diagnosis several times,[1] and a case recently under our care will suffice to illustrate this point. A child of six years was admitted to Great Ormond Street Hospital, with a history of being ill for three weeks, with occasional vomiting. There was right purulent otorrhœa; a mastoid operation on this side had been performed two years before for extensive disease. The child died about ten days after admission to the hospital. The salient points of the case were:

The vomiting did not recur. The temperature was normal or slightly above normal. The pulse varied from 90 to 120. Convulsions of the left side occurred. Both pupils were dilated and fixed. No optic neuritis. Irregular respiration and Cheyne-Stokes' breathing towards the end were observed. The head was occasionally slightly retracted. The child was very apathetic and was fed with difficulty.

The diagnosis was tubercular meningitis involving chiefly the posterior fossa: at the autopsy this was confirmed, the disease being most marked about the medulla and pons.

IX. Diagnosis of Abscess of Brain in a Patient suffering from Chronic Purulent Otorrhœa, the Brain Abscess not being caused by Infection from the Temporal Bone.

When a patient is suffering from the symptoms of abscess of the brain and has also an obvious chronic purulent discharge from the ear, the question as to whether the symptoms are due to infection from the diseased ear will hardly be discussed. The only doubt which is likely to be raised is whether the abscess is in the temporo-sphenoidal lobe or cerebellum.

[1] Cf. the cases by Dr. Bristowe under the heading "Masked Cerebral Tuberculosis," 'Diseases of the Nervous System,' 1888, p. 255; see also Hadden, "Clinical and Pathological Points in Cerebellar Disease," 'Brit. Med. Journ.,' 1884, vol. i, p. 1087.

Influenza has been known to be followed by brain abscess (see Bristowe, 'Brit. Med. Journal,' 1891, vol. ii, p. 6). In one case the abscess was in the left fronto-parietal region, in another in the right occipito-sphenoidal region of the brain. Such cases might easily happen in patients with chronic purulent otorrhœa, and without a very careful consideration of the symptoms the site of the abscess would very likely be missed.

An important case has recently occurred in this relation in the practice of Dr. Dundas Grant, and will shortly be published by him. The patient had double chronic purulent otorrhœa and symptoms pointing to abscess as it was thought in the left temporo-sphenoidal lobe. The patient had had influenza severely two months previously. At the autopsy a large abscess was found in the left frontal lobe.

X. Treatment.

(*a*) **The site for trephining and the search for the abscess.**—The best place for making an opening in the skull for evacuating a cerebellar abscess was pointed out some years ago by one of us in the 'Medical Society's Transactions,' vol. xiii, p. 351. A cerebellar abscess arising from ear disease is usually in the anterior part of the lateral lobe, close to the bone disease (inner side of mastoid or posterior surface of petrous) which has caused the infection. "Place the trephine so that its anterior border is just behind the posterior border of the mastoid process and so that its upper border is below Reid's base line." In this way the trephine is behind the vertical portion and below the horizontal part of the sinus. After the dura is opened the trocar or pus-seeker should be passed forwards, upwards and inwards, through the cerebellum in the direction of the posterior surface of the petrous bone. Thus an abscess situated in the anterior and outer part of the hemisphere will be evacuated. If the abscess is in the anterior and inner part of the lobe the cannula will have to travel quite two inches inwards from the surface before pus is struck. It is probable that in many instances an abscess has not been opened, and the patient's life lost, because the surgeon has

hesitated to plunge the cannula in far enough. In abscess of the flocculus, pus will have to be found still more deeply. When a very large abscess is present, its discovery and evacuation will not be difficult. In one case, under the care of one of us, pus was seen at the operation oozing through the sutures at the asterion. This pus was coming from the interior of the lateral sinus, whose outer and inner walls had sloughed, thus exposing the cerebellum : in the posterior half of the lateral lobe an abscess was found and evacuated, this having probably arisen from infection from the sloughed sinus and not from the disease of the temporal bone. The symptoms of typical lateral sinus pyæmia had been present for fifteen days when they became modified in a manner indicating the presence of an abscess. When a second abscess forms it should be looked for on the inner side of the first or posterior to it.

(*b*) **Return of symptoms after evacuation of the abscess.**— From the records of cases before us and from our own experience it is clear that this event is by no means uncommon, even when the patient is apparently convalescent a few days or two or three weeks after the operation. This is due either to the (i) refilling of the old cavity from faulty drainage or (ii) to the formation of a new abscess in another part of the same lobe. The treatment of the first cause of the return of symptoms is obvious, but the not infrequent presence of a second abscess in the cerebellum is not generally known in the profession, and so lives are lost. If no refilling of the old cavity has taken place, diligent search for a new abscess must be made and the pus in it evacuated. There does not seem to any record of a second abscess in a new situation in cases of temporo-sphenoidal abscess, though we have seen difficulties arise in the drainage of such an abscess—the refilling of the cavity, with return of symptoms, necessitating the making of a counter-opening in the skull lower down so as to effectually empty the cavity. Surgically the cerebral tissue seems capable of healing just as any other tissue, but septic lesions of the cerebellum appear more liable to spread and less able to heal than those of the cerebrum. A ravenous appetite following brain abscess and brain injury (see cases

collected by Stephen Paget, 'Clin. Soc. Trans.,' vol. xxiv, p. 192) may, we think, point to a hopeful prognosis. Albert Jones's appetite was voracious from the time he commenced to convalesce.

(*c*) **Irrigation and drainage of the abscess.**—If the abscess is not large the drainage may be by a decalcified bone tube, but if the abscess is large such drainage will possibly be inefficient, and therefore dangerous, and a rubber or silver tube must be used.

As to irrigation, a small cavity deeply situated should not be irrigated, but a large cavity may be safely and effectually washed out by the use of a small tube for the entering fluid, and a large one for the exit tube. The fluid for irrigation must be at 100° F. temperature, and may be of boracic lotion or weak carbolic lotion 1 in 100—the latter of course is the more powerful antiseptic. The fact that a drainage-tube from a brain abscess passes out through the scalp flap makes it incumbent on the surgeon making every attempt to asepticise the shaven scalp previous to operation and to sprinkle some powder—iodoform, boric acid, or double cyanide—on the skin over the area of the operation before applying the dressing. The dressing may be "dry," or may be of double cyanide gauze wrung out in 1 in 40 carbolic lotion. The gauze dressing should be covered with double cyanide wool or perchloride wood-wool tissue.

(*d*) **The temporal bone disease.**—Not only must the brain abscess be evacuated, but the disease which has caused the intracranial infection must also be removed. This is best done by the Stacke operation[1] which, if carefully and methodically carried out, results in the most thorough exposure and removal of the disease in the masto-petrous cavities.

(*e*) **Absence of signs of inflammation over the mastoid; absence of discharge from, or pain in the ear; an inodorous discharge.**—(i) None of these negative indications ought to mask the possibility of the symptoms of the patient being due to intracranial disease, or ought to cause a doubt to arise as to the desirability of doing the Stacke operation.[1]

[1] Prof. Stacke, of Erfurt, read a paper at Halle in September, 1891, in which he described a new method of operating in chronic suppurative disease

Sclerosis of the superficial parts of the mastoid frequently is associated with long-continued suppuration of the antral tympanic cavities, hence the absence of inflammatory symptoms over the mastoid region.

(ii) Absence of discharge from the external auditory canal does not show that the case is not aural in origin. In nine out of fifty-seven fatal ear cases (Newton Pitt, 'Brit. Med. Journ,' 1890, vol. i, p. 643), there was no otorrhœa, and we have known fatal ear cases in which the real nature of the disease was not suspected until the autopsy was made, because there was no external otorrhœa, and the ears were not examined. Again, it is frequently impossible to determine the presence of discharge until the promontory has been wiped (the membrana tympani having long since been destroyed) with a small piece of wool.

(iii) An inodorous discharge may contain organisms more fatal to life than offensive pus (compare Rohrer and Barker, 'Illust. Med. News,' 1889, vol. iv, p. 13).

(*f*) **Danger of delay in operating.**—As soon as an abscess in the brain has been diagnosed, even if it cannot be precisely localised, no delay in operating is justifiable. This is especially the case in abscess of the cerebellum, since death may occur suddenly from pressure on the respiratory centre. We know of more than one case in which, operation having been arranged for the next day, the patient died in the night. Further, if the natural breathing ceases during operation, artificial respiration must be carried on while the operation is continued, the cerebellar abscess opened, pressure thus relieved and natural breathing restored.

of the ear. His operation is based on the surgical principles involved in the treatment of suppurations in rigid-walled cavities: namely, upon the complete exposure of the disease and free laying open of the cavities. In the Stacke operation the attic, tympanum, antrum, and osseous meatus are converted into one large cavity.

Stacke's operation is fully described in Prof. Schwartze's 'Handbuch für Ohrenheilkunde,' 1893, Band ii, p. 815; also by Dr. Allen, of Cincinnati, in his monograph on 'The Mastoid Operation,' 1892, p. 100.

The modification of Stacke's operation, adopted in Prof. Schwartze's clinic, was the operation carried out on the case related above.

Panse's modification of Stacke's operation (see 'Chirurgie opératoire du Système Nerveux,' par A. Chipault, tome i, 1894, p. 546) is well spoken of, but the writer has not performed it.—C. A. B.

Another reason for not delaying operation is the risk there is that the abscess may burst into a ventricle, making recovery almost hopeless. When this occurs the temperature rises, the pulse and respiration quicken, and the patient soon dies.

PART III.

Synopsis.

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The following abstracts have been taken from the sources indicated on pp. 210—213. They all refer to abscesses of the cerebellum secondary to ear disease or disease of the temporal bone, excepting Nos. 6, 7, and 36, which have been included for special reasons.

It would have been easy to multiply the number to a large extent, as may be gathered from the references given on pp. 215—217, but the total has been limited. 77 cases are given in abstract, whilst 24 have been collected (as stated) from the records of St. Thomas's and the Great Ormond Street Hospitals.

No attempt has been made to define exactly the functions of the cerebellum from the symptoms which have been noted in cases of cerebellar abscess, since it is obvious that such a

proceeding would be open to numerous fallacies, and that any deductions so made would have little or no practical value. All that has been aimed at is to give some indication as to whether the results of one particular pathological condition of the cerebellum (abscess) may give rise to the same symptoms as have followed experimental removal of parts or the whole of the organ. There are at present few data available for determining how far the symptoms in cerebellar disease depend upon the precise seat or nature of the lesion, since much otherwise valuable information is useless for this purpose, owing to the fact that many of those who have collected and recorded cases of cerebellar disease, have grouped together abscesses, tumours, hæmorrhage, softening, tubercle, &c., a method which must lead to erroneous conclusions.

It is hardly to be expected that abscess of the cerebellum should constantly give rise to symptoms comparable to those which result from experimental lesions; since pressure on neighbouring parts, or irritation of the organ itself, will frequently give rise to phenomena widely different from those which result from removal of the part, for it is well known that many of the objective symptoms of cerebellar disease are not expressions of disordered functions of the cerebellum itself, but are the result of pressure on, or inflammation of, neighbouring parts, in consequence of which the essential and localising signs of cerebellar disturbance may be placed completely in the background.

Four facts stand out prominently in the record of cases that have been published, as far as we have been able to trace them.

1. *That every case of cerebellar abscess not operated upon has proved fatal;*[1] and that up to the year 1886 no successful case of operation had been reported. Since that time ten (? eleven[2]) cases have recovered after operation, while sixteen others have died after operation. These numbers do not

[1] The fact has not been overlooked that cerebellar abscess may become encysted.

[2] Dr. F. H. Haydon, of Marlborough, has recently had a case under his care in which he evacuated a large collection of pus situated three inches inwards and a little downwards from an opening just posterior to the left ear. There is no certain evidence that the abscess was situated in the cerebellum, so that the case has not been included in the abstracts.

accurately represent the percentage of success after operation, since it is within our knowledge that many fatal cases have not been published; but they serve to show that cerebellar abscess may be successfully treated, and give a good hope that with more accurate diagnosis and more prompt action many lives may be saved which would otherwise be certainly lost.

2. *That an overwhelming proportion of all cases of cerebellar abscess are secondary to disease of the ear,* the most frequent exceptions being those which are due to pyæmia or mechanical injury. From this it follows—

3. *That given a brain abscess secondary to ear disease without pyæmia, it will almost certainly be situated either in the cerebellum or in the temporo-sphenoidal lobe,* and if the ear disease is unilateral, the abscess will be on the same side.[1] These facts are of immense practical importance.

4. *That if paralysis occurs directly as the result of abscess of the cerebellum it will probably be on the side of the lesion,* as was the case in Nos. 7, 19, 56, 68, 77. The two exceptions to this rule, Nos. 5 and 6, are both recorded by Andral, and they have both been inserted in our list, though it may be doubted whether the cerebellar lesion was due to ear disease. Andral[2] mentions altogether three cases of cerebellar abscess in which paresis was observed; in one there was loss of power on the same side as the abscess, in a second on the opposite side, while in the third there was first loss of power in the lower limbs, and later in the upper ones. In this case there were abscesses on both sides.

The relative frequency of brain abscess to ear disease in a large number of cases is given by Jansen in statistics collected from the cases seen at the University Clinic for Diseases of the Ear at Berlin ('Berliner kl. Wochensch.,'

[1] We have not found any exception to this. In a case under the care of Dr. Wilks ('Med. Times and Gaz.,' 1861, vol. ii, p. 349) it is stated in the synopsis of the case, and the statement is copied in the Index-Catalogue of the Library of the Surgeon-General's office, Washington, that disease of the *right* ear was followed by an abscess in the *left* lobe of the cerebellum. The post-mortem report, which Dr. Wilks informs us is correct, states that the abscess was on the RIGHT, so that the case does not present any deviation from the general rule as stated above.

[2] Andral, 'Clinique Médical,' 1835, p. 707.

1891, p. 1162). He found 7 cases of brain abscess due to ear disease amongst about 5000 patients suffering from inflammatory or suppurative diseases of the ear, and of these 6 cases occurred amongst 2500 cases of chronic otitis, whilst only one brain abscess was recorded as resulting from 2650 cases of acute otitis. Amongst this group of cases it would therefore appear that brain abscess was at least six times more common after chronic than after acute ear disease.[1] Of the 7 brain abscesses, 4 were in the cerebellum, 3 in the temporo-sphenoidal lobe.

Chronicity of the ear disease does not afford protection against the occurrence of brain abscess. In one instance recorded by Chaix (No. 47) ear symptoms had existed on and off for 35 years previous to the acute and fatal termination of the case. On the other hand, *the duration of the acute or brain symptoms is seldom long.* Out of 49 cases in which there is any precise record, 39, or about 80 per cent., proved fatal before the end of the fourth week, and 19, or nearly 40 per cent., before the end of the second; in only 4 cases has death occurred in less than a week after the onset of acute symptoms.

The number of times in which certain specified symptoms are mentioned in the cases referred to in the foregoing paper, are given below in a tabular form. It must, however, be remembered that the numbers cannot be taken as any definite indication as to the percentage of cases in which certain symptoms may be expected to occur, since it would be erroneous to infer that any particular symptom was absent in every case in which its presence is not noted.

[1] Striking as these numbers are, it may be doubted whether they really represent the relative frequency of brain abscess following chronic and acute otitis respectively. In our experience of a considerable number of cases of intra-cranial inflammation resulting from ear disease we have never seen one arising from acute otitis media.

Tabular Statement of 100 *Cases of Cerebellar Abscess.*

A. *Sex.*—Males . . 59
Females . 35
Sex not given . 6

B. *Age*:
Under 10 years, 12 cases.
11—20 „ 42 „
21—30 „ 23 „
31—40 „ 14 „
Over 40 „ 4 „
Not stated 5 „

C. Duration of acute symptoms:
Under 7 days, 4 cases.
1—2 weeks, 15 „
2—3 „ 13 „
3—4 „ 7 „
5—6 „ 3 „
6—7 „ 3 „
2—3 months, 3 „

D. Side of Abscess:
Right . . 55 cases.
Left . . 37 „
Flocculus . 1 „ (No. 55).
Middle lobe . 1 „ (No. 15).
Both sides . 1 „ (No. 32).
Not stated . 5 „

E. Number of times certain specified symptoms occurred:
Vomiting . . 34 cases.
Headache . . 61 „
Vertigo . . 18 „
Staggering . . 7 „
Rigidity of neck . 17 „
Paralysis of limbs:
Same side as abscess 5 „ (Nos. 7, 19, 56, 68, 77).
Opposite side . 2 „ (Nos. 5 and 6).
Knee-jerk, normal . 6 „ (Nos. 27, 52, 54, 59, 70, 74
„ increased . 4 „ (Nos. 60, 61, 75, 77).
„ absent on side of abscess . 1 „ (No. 56).
Ocular symptoms:
Optic neuritis, present . . . 20 cases.
„ absent . . . 7 „
Deviation of eyes towards side of lesion . 2 „ (Nos. 28, 60)
„ away from side of lesion . 6 „ (Nos. 38, 41, 61, 67, 70, 77)

Ocular symptoms:		
Strabismus	7	cases.
(Nos. 4, 19, 20, 28, 41, 62, 72)		
Nystagmus	5	„
(Nos. 54, 55, 67, 70, 77)		
Position in bed.—Lying on side opposite lesion . .	6	„
(Nos. 8, 35, 54, 70, 73, 77)		
Same side as lesion	1	„
(No. 16)		
Difficulty in swallowing	5	„
Yawning	3	„
Pulse below 60	8	„
Temperature + ...	17	„
„ —	5	„
Operation.—Recovery	10	„
(Nos. 49, 52, 56, 57, 58, 59, 70, 71, 76, 77)		
Death	16	„
(Nos. 46, 48, 50, 51, 53, 54, 55, 60, 63, 66, 67, 68, 69, 73, 74, 75)		

We wish to express our obligations to the writings of Professor MacEwen and Professor Ferrier, and to the experimental researches of Dr. Risien Russell, and also to record our special thanks to Dr. Grünbaum for the valuable help which he has given us in collecting cases. We have also to acknowledge the help which we have received from Dr. Box and Mr. Stansfield Collier.

No.	Reference.	Sex and age.	History.	State on admission and subsequently.	Treatment.	Result.
1	Duncan, 'Edin. Med. and Surg. Journ.,' 1821, vol. xvii, p. 331	M., 19	Two years ago right ear pulled. Since then severe headache and discharge from that side	Aug. 31st.—Intense headache, abdominal tenderness, prostration. Pulse 60	—	Death. P.M.—Abscess occupying nearly the whole of the right lobe of the cerebellum. Caries of petrous bone. Tympanum full of pus.
2	Lallemand, 'Recherches anatomico-pathologiques sur l'Encéphale,' 1823, tome ii, p. 87	M., 20	Pain, but no discharge, in right ear for a long time. Died, after a blow received in a fight, in 20 days with symptoms of "fièvre ataxique"	—	—	Death. P.M.—Abscess with membrane in right lobe of cerebellum. Pus on its inferior surface. Pus in right tympanum.
3	Abercrombie, John, 'Diseases of the Brain, &c.,' 2nd edit., 1829, p. 35	F., 9	Attacks of suppuration from the ear, usually preceded by severe pain and fever, which disappeared when the discharge began.	Attack in July, 1810, not relieved when discharge began from left ear; frontal headache, vomiting, photophobia; pulse 84. 2nd day.—Pulse 60. 3rd day.—Slight delirium, stupor, slight convulsions; occasionally pain in occiput, but chiefly in forehead. 4th day.—Pulse 80—86. 5th day.—Continued sensible, but died suddenly in afternoon; no squint, blindness, nor coma; pulse under 90	Bloodletting, purging, blisters, mercury	Death. Duration 5 days. P.M.—Abscess in left lobe of cerebellum of considerable extent, and extremely fetid. Caries of tegmen tympani.
4	Abercrombie, loc. cit., p. 102	F., 18	March 4th, 1813.—"Inflammation of bowels;" pain in left ear. 7th.—Headache	March 11th.—Violent headache; discharge of pus from left ear. 13th.—Pulse 160, feeble. 14th.—Pulse 80. 15th.—Pulse 60; headache unabated; tendency to coma; pupil dilated. 16th.—Same; pulse 80 to 120. 18th.—Unable to swallow; pulse 90 to 150. 19th.—Squinting; pulse 96 to 160. 20th.—Squinting increased; still great difficulty in swallowing; still violent headache; apathetic, but sensible. 22nd.—Death without unconsciousness; great dilatation of pupils, but no blindness	—	Death. Duration of symptoms 18 days. P.M.—"Left lobe of cerebellum entirely converted into a bag of purulent matter, of greenish colour and intolerable fœtor." "Bone sound."

No.	Reference.	Sex and age.	History.	State on admission and subsequently.	Treatment.	Result.
5	Andral, 'Clinique médicale,' tome v, p. 682, 2nd edit., Paris, 1833	F., 31	Deafness. Severe occipital headache on right side. 8 days later left hand drops things. In a month complete left hemiplegia. In 5 weeks also blindness	On admission pupils moderately dilated and react to light. Speech and intelligence fair. 3 days later convulsive movements in paralysed limbs; delirium, coma, and death	—	Death. Duration of symptoms 5½ weeks. P.M.—Large greyish pulpy focus in right lobe of cerebellum. Left healthy.
6	Andral, loc. cit., p. 703	F., 19	Pain in back of neck, then gradual loss of power on right side in 5 weeks	Paralysis of right side of body, with contracture of right arm. Attacks of pain in upper part of neck. Convulsions, without loss of consciousness, commencing in the head; these gradually increased in severity and frequency. During the last few days also vomiting	—	Death. Duration of acute symptoms 15 days. P.M.—Left lobe of cerebellum contains a cyst full of pus, lined by a membrane.
7	Duplay, 'Archives générales de Médecine,' 1836, p. 275	M., 27	Fall on back of head. Continuous occipital headache ensued, and one month later general convulsions, which occurred occasionally up to time of admission, together with paresis of right side, the latter increasing with corresponding diminution of the convulsions on that side	July 4th, 1829.—Apathetic; nausea and vomiting; severe occipital headache; diarrhœa; mouth deviates to left; limbs on right side completely paralysed; sensation impaired on right side; vision and hearing unimpaired; pulse frequent but regular. July 12th.—Convulsions for 1½ hours; coma. July 13th.—Death	—	Death. Duration 8½ months from accident. P.M.—Right lobe of cerebellum healthy. Left lobe contains a cyst filled with pus, and lined by a membrane half line in thickness.
8	Pilcher, G., 'A Treatise on . . . and Diseases of the Ear,' London, 1838, p. 192	F., 12	Pain and deafness in right ear 12 months, recurring, without discharge; occipital headache. Oct. 31st, 1831.—Pain more severe; with otorrhœa	Oct. 25th, 1831.—Severe pain and purulent discharge from right ear; tenderness over mastoid; pulse quick; fever. Nov. 1st swelling, and on Nov. 2nd fluctuation, over mastoid. Puncture; stinking pus evacuated; rigor; restlessness. Nov. 3rd.—Convulsion; lying on left side; respiration hurried; pulse quick; pupils natural; much discharge from ear and mastoid opening. Nov. 6th.—Sym-	Incision over right mastoid	Death 11 days after onset of acute symptoms. P.M.—Small abscess under pericranium in line with longitudinal sinus. Small quantity of pus under pia mater over middle lobe of cerebrum. Large abscess in right lobe of cerebellum.

				ptoms unabated; sensible until death		Caries of petrous bone, communicating with tympanum and mastoid cells.
9	Rayer, 'Maladies des Reins,' tome iii, p. 161, Paris, 1841	F., 40	Continual headache for 8 months; also vertigo and deafness	Sept. 16th, 1839.—Deafness, vertigo, slow speech, photophobia; head held on one side; held up with difficulty. Sept. 23rd.—Retention, constipation. Sept. 25th.—Pupils motionless and dilated; coma. Sept. 26th.—Death. Paralysis, first of legs and then general	—	Death. Duration of acute symptoms 10 days. P.M.—Right lobe of cerebellum converted into a cavity filled with pus, lined by a membrane.
10	Dupuy, 'Comptes Rendus, &c., de la Soc. de Biol.,' tome iv, 1857, p. 6	F., 28	Cephalalgia 15 years; otorrhœa since infancy	Jan. 28th.—Walking difficult; right pupil sometimes larger than left; vomiting; constipation; head retracted. Feb. 2nd.—Staggering to right and left; fell forward on getting up alone; delirium 2 days. Death Feb. 9th	—	Death. Duration of acute symptoms about 8 weeks. P.M.—Abscess in right lobe of cerebellum; left lobe healthy. Caries of petrous bone.
11	Macintyre, 'Trans. Path. Soc. Lond.,' vol. i, 1846, p. 12	M. ?	Total deafness right side for years; greater part of the time right otorrhœa. Last 2 years of life also headache	Aug., 1846.—Attack with more severe pain. Paralysis of right side of face, with distortion of mouth to left. Stupor, coma, death	—	Death. P.M.—Abscess in substance of cerebellum, communicated by meatus internus with the ear. Caries of temporal bone (side not specified).
12	Butcher, 'Dublin Med. Press,' 1846, vol. i, p. 196	M., 20	Deafness of right ear 12 months. Membrane incised. From this time periodic attacks of headache, pain in right ear, insomnia, and delirium	In addition 14 days before death, rigors and all the symptoms of fever	—	Death. P.M.—Abscess in anterior part of right lobe of the cerebellum, size of walnut. Small tumour on right auditory nerve.
13	Heale and Toynbee, 'Trans. Path. Soc. Lond.,' 1849, p. 271, and Toynbee, 'Med.-Chir. Trans.,' 1851, vol. xxxiv, p. 260	F., 20	Pain and discharge from left ear 6 years. [In the latter reference right and left are obviously confounded]	Admitted Royal Free Hospital, March 9th. Shivering, headache, and pain in left ear, followed by an abscess behind it; then a large fetid discharge; finally erysipelas, violent delirium, coma, and death on April 15th	—	Death. P.M.—Abscess in left lobe of cerebellum. Lateral sinus thrombosis. General pyæmia.

No.	Reference.	Sex and age.	History.	State on admission and subsequently.	Treatment.	Result.
14	Toynbee, 'Med.-Chir. Trans.,' 1851, vol. xxxiv, p. 262 (from Dr. Pilcher's MS. notes)	— 13	Right otorrhœa several years	Headache, epileptiform fits. Great depression for 3 weeks. Convalescence. Sudden death	—	Death. P.M.—Abscess in right lobe of cerebellum. Caries of petrous bone.
15	Merchie, 'Gazette des Hôpitaux,' 1855, p. 187	M., 21	—	Sept. 17th, 1854.—Violent occipital headache, insomnia, opisthotonos, dilatation of pupils, constipation. Pulse rate increased. Delirium. Sept. 24th.—Death	—	Death. Duration (?) 7 days. P.M.—Abscess in middle of cerebellum.
16	Gull, W. W. 'Guy's Hosp. Rep.,' vol. viii, 1857, p. 261. (case No. 3)	F., 20	3 weeks previously severe blow on right side of head; discharge from right ear; paralysis of face after 2 weeks	12 days after admission to Guy's, severe frontal and occipital headache, and pain in upper part of neck; lay on right side, head pressed between hands; vertigo; nausea; frequent vomiting; frequent "chills and heats"; extremities cold; pulse 56-69; resp. 20, variable; abdomen collapsed, constipation; fetid, purulent discharge from right ear; no delirium or unconsciousness	Leeches; saline purgatives	Death about 12 days after onset of acute symptoms. P.M.—Abscess containing 6 dr. of greenish pus, not fetid, in right lobe of cerebellum; lateral sinus contained adherent clots; vein of aqueductus vestibuli inflamed
17	von Troeltsch, 'Virchow's Archiv,' 1859, Bd. xvii, p. 39	M., 37	Left otorrhœa for 7 years	Nov. 10th, 1857.—Violent headache (not localised). Apathetic. Temperature normal. Left otorrhœa. Mouth drawn to right in speaking. Polypus in left meatus, which is filled with fetid pus. Coma. Death	Syringing, leeches, blister, aperients	Death. Duration of acute symptoms 3 (?) weeks. P.M. — Small abscess, about size of pigeon's egg, in left lobe of cerebellum. Lateral sinus healthy. Necrosis of left petrous bone. Polypi in meatus, tympanum, and Eustachian tube. Mastoid cells full of pus.
18	Toynbee, 'Diseases of	M., 35	Frequent earache, with discharge. 5 weeks be-	Patient was dull, heavy, and stupid, yet remarked that people in the street must think him	—	Death. P.M.—Abscess in right lobe of the cere-

	the Ear,' London, 1860, p. 324		fore death large polypus removed from external meatus, followed by great pain in back and right side of head, and down neck and shoulders	drunk from his gait		bellum, about the size of a pigeon's egg, filled with fetid pus. Caries of petrous bone
19	Toynbee, ibid., p. 328 (Dr. Budd's case) Budd, 'Provincial Med. and Surg. Journ.,' 1851, p. 621	M., 13	Beginning of June, 1851, severe right temporal headache; right otorrhœa and deafness. Another attack on June 12th; the temporal headache limited to area the size of a crown-piece, but not very acute; no otorrhœa; speech thick and indistinct; no strabismus; no vomiting; bowels torpid; pulse 100	June 13th.—In addition to above symptoms, gait insecure, with dragging of right leg; pain extending to forehead; vomiting. June 16th.—Also diplopia. June 17th to July 1st.—Improvement; could do nearly anything; thickness of speech only symptom remaining. July 3rd.—Relapse; acute pain, worst in right occipital region; movement of head painful; frequent yawning; pupils dilated, but equal and sensitive; photophobia; no discharge from right ear; ticking of watch heard; vomiting; right hand weaker than left; no other paralysis; no fits; pulse 40; abdomen retracted. Till July 7th little change. July 7th to 14th.—Improvement, then paroxysms of pain, followed by stupor, until death on July 17th	—	Death. Duration 7 weeks. P.M.—Three abscesses in right lobe of the cerebellum; two, which only separated, but did not destroy the cerebellar substance, about size of Spanish nut and walnut respectively. The largest was in the centre of the lobe, and destroyed the cerebellar substance; its contents were more fluid, and it was evidently the most recent. Mastoid disease. Tympanum full of yellow lymph, but ossicles and membrane were intact.
20	J. Hutchinson and Hughlings Jackson, 'Med. Times and Gaz.,' 1861, vol. i, p. 197	F., 17	Otorrhœa right side for 5 years. Jan. 9th, 1869.—Shivering, headache, pains about right ear. Then better for 2 days. Jan. 12th.—Vomiting, delirium	Jan. 17th.—Admitted into Leeds Infirmary. Frontal headache, chiefly on right side; pain in right ear; fluctuation over right mastoid; slight otorrhœa, tinnitus, strabismus; pulse 108; resp. 28. Jan. 18th.—Rigor; alternating consciousness and coma. Jan. 21st.—Rigor, death	Leeches and aperients	Death. Duration of acute symptoms 13 days. P.M.—Abscess, about the size of a walnut, containing fetid green pus, in right lobe of cerebellum. Caries of right tympanum.
21	J. Hutchinson and Hughlings Jackson, loc. cit.	M., 25	Cold and pain in right ear when 14 years old. Discharge from right ear when 20 years old. 7 months ago pain and paralysis of right side of face	Oct. 13th, 1860.—Admitted into St. Mary's Hospital. Intense pain in right ear. Copious fetid otorrhœa. Polypi in meatus. Death in 16 days	—	Death. Duration of acute symptoms 16 days. P.M.—Small abscess containing fetid pus in right lobe of cerebellum. Caries of right petrous bone.

No.	Reference.	Sex and age.	History.	State on admission and subsequently.	Treatment.	Result.
22	J. Hutchinson and Hughlings Jackson, loc. cit.	M. ?	Measles. Otorrhœa both sides till 3 years ago. ? Epilepsy from 1857. Nov. 26th, 1859.—Pain in right ear; discharge for a few days; upon its cessation pain increased, and patient became delirious. In bed 6 weeks, then to hospital	Jan. 10th, 1860.—In pain, but sensible; pupils natural; pulse 70. Pulse varied from 60 to 70. Patient apathetic till he had a fit on Jan. 13th. Pulse ran up to 150, and patient died in 2 hours	—	Death. Duration of acute symptoms nearly 7 weeks. P.M.—Three abscesses in right lobe of cerebellum, largest about size of Spanish chestnut. Caries of right tympanum.
23	J. Hutchinson and Hughlings Jackson, loc. cit.	F. ?	—	Nov. 23rd, 1860.—Admitted with acute head symptoms following a discharge from ear, dating since infancy	—	Death. P.M.—Abscess containing fetid pus in right lobe of the cerebellum. Lateral sinus healthy. Caries of petrous bone.
24	Schwartze, 'Archiv für Ohrenheilkunde,' 1864, Bd. i, p. 195	F., 46	Discharge from ears since 3 years old (after measles). Polypus in left ear for 17 years	July 23rd.—Severe headache, more marked on left side; vomiting. Cervical muscles rigid. Very deaf. Polypus in left meatus. No tenderness of mastoid or skull. Clonic spasm of left half of face; later paralysis. Left palpebral fissure larger than right. Pupils equal, contracted and sluggish. Pulse 60 to 66, once 78. During last 24 hours convulsions, with marked cervical contracture	Calomel, opium, morphia	Death. Duration of acute symptoms about 3 weeks. P.M.—In right lateral lobe of cerebellum a walnut-sized abscess, superficial and close to internal auditory meatus. Lateral sinus healthy. Pus at internal auditory meatus and over left side of pons. Seventh and eighth nerves destroyed. Granulations in left tympanum.
25	'St. Bart.'s Hosp. P.M. Records,' vol. v (quoted by Gull, W. W. & Sutton, H. G. 'Reynolds'	F., 41	Discharge from right (?) ear for several years	Loss of power right half of face; constant pain right side of head; hyperæsthesia on right; became drowsy and semi-comatose, conscious when spoken to day before death; no paralysis or irregular movements of limbs; could feed herself and stand up	—	Death 42 days after onset of acute symptoms. P.M.—Encysted abscess in right lobe of cerebellum, communicating directly with diseased temporal bone.

	System of Med.,' vol. ii, 1868, p. 562)					
26	Loc. cit., vol. viii, quoted by Gull, W. W. and Sutton, H. G., loc. cit., p. 562	M., 23	Scarlet fever some years previously, followed by deafness and earache on right side; 11 days before admission to St. Bart.'s Hosp. rigor, followed by intense pain in head; able to walk to hospital	Great pain, especially in back of head, occasional vomiting; pain became agonizing; screaming; quite conscious; no paralysis; no irregular movements; died day after admission	—	Death about 15 days after onset of acute symptoms. P.M.—Abscess in right lobe of cerebellum size of walnut, opening on to surface of lobe; right temporal bone carious; chronic ulcer of stomach.
27	Feinberg, 'Berliner klinische Wochenschrift,' 1869, vol. vi, p. 221	M., 46	History of double otitis media for 15 years	April 23rd.—Pain in ears and temples. Absolute deafness; both meatuses full of pus. Vomiting. Gait staggering and inco-ordinate. Reflexes "not diminished." Sensation of lower extremities, of temperature and touch unaltered. No ocular affection. Intellect unaffected. Temperature "normal." Pulse 60 to 48. Later, paroxysmal pain; right facial paralysis; myosis; photophobia; apathy and somnolence; death. Cerebellar abscess diagnosed	Leeches, calomel, jalap	Death. Duration of acute symptoms 3 weeks. P.M.—Superficial abscess, size of a walnut, in lower part of right lobe of cerebellum, close to the medulla. A smaller one on left side, at its under part. Both tympanic cavities diseased, right more than left. Caries of right petrous bone. Left only hyperæmic.
28	Moos, 'Archiv f. Augen. u. Ohrenheilkunde,' 1869, vol. i, p. 225	F., 2	Measles 5 weeks ago. During convalescence right otorrhœa. Convulsions 3 times	March 1st.—Pulse irregular; right fetid otorrhœa; pupils equal and active. Improvement till 20th.—Right side of face contracted, and right palpebral fissure smaller than left. 21st.—Neck and right arm contracted; eyes turned to right and downwards; twitching on right side; swallowing difficult; drowsy. 22nd.—Left half of face partially paralysed; right arm and leg moved principally; all limbs became stiff on attempting to raise child; opisthotonos when lying on its side; right thumb drawn in. Evening.—Left downward squint; contracture of right arm; left arm flaccid; pulse 156. Similar symptoms, with increasing difficulty in swallowing, persisted until death on April 22nd	—	Death. P.M.—Two abscesses in cerebellum on right side; one about size of hazel-nut, close to petrous bone, and extending anteriorly towards the peduncle; behind this a much larger one, about size of an egg, occupying nearly the whole of the hemisphere, and thus having a very thin wall. Fetid pus inside. Caries of petrous bone. No meningitis.

No.	Reference.	Sex and age.	History.	State on admission and subsequently.	Treatment.	Result.
29	Deutschbein, 'Vierteljahrschrift für gerichtl. u. öffent. Medicin,' 1870, Bd. xiii, p. 237	M., 20	Nov. 8th.—Received a superficial scalp wound in a fray, and half hour later was seized with convulsions. Otitis media had existed for some years. 8 days after injury back to work for a few days	Convulsions, then semi-consciousness; headache, right side; giddiness on sitting up; no paralysis; pulse small and slow. Dec. 29th.—Still headache and weakness; pulse slow. Dec. 31st.—Death	—	Death 54 days after injury. P.M.—Abscess, about size of walnut, in right lobe of cerebellum. Caries of right petrous bone. Slight basal meningitis. Suppuration in right tympanum. Lateral sinus normal. No evidence of traumatism.
30	Maunder, 'Lancet,' 1873, vol. i, p. 443	F., 16	Scarlet fever and measles when a child, and smallpox 6 months ago. Fortnight before admission earache, followed by discharge and giddiness	Admitted into London Hospital May 25th, 1872. Left otorrhœa; pain "all over head;" "head felt going round and round"; deafness; vomiting; double optic neuritis; temperature normal. June 5th and 6th.—Fits; apparently no paralysis. June 8th.—Two fits, with twitching of face in first. June 14th.—Better; constipation. June 29th.—Better; no more fits; can do needlework; optic neuritis still marked. July 31st.—Death; no cranial nerve paralysis; optic neuritis still marked. [Most of the notes were dictated by Dr. Hughlings Jackson]	—	Death. Duration of symptoms 3 months. P.M.—Left half of cerebellum completely hollowed out, forming a large abscess cavity. Caries of petrous bone.
31	Hughlings Jackson, 'Lancet,' 1873, vol. i, p. 444	M., 33	Discharge from right ear 10 years, after a blow. Sudden giddiness about 2 months before admission. In hospital from Aug. 7th to Oct. 2nd, 1872	Admitted to London Hospital, second time, on Oct. 7th, 1872. Intense headache; no local motor symptoms; no optic neuritis till night of death, when there was great fulness of veins and a little indistinctness of edge of disc. Oct. 14th.—Increased pain in head. Found dead by the night nurse	—	Death. Duration 4 months. P.M.—In outer part of right lobe of cerebellum an abscess about the size of a walnut, having a tough, thick wall. Lateral sinus contained purulent and fibrinous flakes. Caries of petrous bone.

32	Gribbon, 'Lancet,' 1878, vol. i, p. 712	M., 22	Right otorrhœa for some time	Nov. 3rd.—Headache; pain in right ear, slight discharge; pulse 70. 4th.—Little numbness in right side of face; constipation. 5th.—Pulse 70; temp. 101·8° F. 6th.—Headache most persistent in occiput; tendency to vomiting. 8th.—Headache increased; muscular power failing; pupils unaffected. 9th.—Motor power of lower limbs almost gone; upper unaffected. 10th.—Delirium; pupils dilated, do not react; legs stiff, not arms; on gently raising head, gush of purulent fluid from ear, with death in less than a minute	—	Death. Duration 1 week. P.M.—"On examining the cerebellum, all of the interior of the organ except about the anterior third of the median and left lobes was found to be an abscess of extremely fetid character." "Appeared to have begun in right lobe." No meningitis. Pus in mastoid cells.
33	Kretschky, 'Wiener med. Wochensch.,' 1879, vol. xxix, p. 313	F., 38	Left otorrhœa for 2 years, 20 years ago, after a fall. Headache for some weeks before admission	Dec. 13th, 1878.—Severe continuous headache, referred solely to left side of occiput and left ear; copious purulent discharge from left ear; head held stiff; apathy; temp. 38·6° C. in evenings; pulse 72 to 84; coma. Dec. 31st.—Death	—	Death. Duration of acute symptoms about 4 weeks. P.M.—Cerebellar abscess, size of walnut, in anterior part of left lobe.
34	Berridge, 'Lancet,' 1880, vol. ii, p. 376	M., 17	"Gatherings in head"; no scarlet fever, &c.; slow at school. August, 1879.—Spoke with commencing jerk and final drawl. Headaches; occasional retchings; giddiness; "no reel"; edges of both optic discs blurred	Dec. 1879.—"Long history of ear discharge"; blind; intense double optic neuritis; vomiting frequent; intense pain at back of head; abscess in brain diagnosed; died suddenly March 12, 1880	—	Death 7 months after onset of definite symptoms. P.M.—Abscess involving nearly whole of right lobe; cerebellum containing 3 oz. of sweet pus.
35	Raymond, 'Progrès Médical,' 1881, p. 749	M., 22	Attacks of pain in ears since 6 or 7 years of age; they usually lasted about a day, and disappeared when a discharge was established. 3 weeks ago, after an interval of 4 years, pain and discharge from the left ear appeared; vomiting	Aug. 12th.—On admission paroxysmal attacks of pain in head; lies on right side with body curled up, knees bent, chin nearly touching sternum; temp. 38·8° C., pulse 120; constipation; nearly deaf in left ear; polypus in external meatus; otorrhœa; no motor or sensory affection whatever; no ocular affection; cerebellar abscess diagnosed. Aug. 14th.—Sudden death	—	Death. Duration about 23 days. P.M.—Whole of left lobe of cerebellum converted into an abscess, containing inodorous pus, and having a thick wall. Caries of tympanum.

No.	Reference.	Sex and age.	History.	State on admission and subsequently.	Treatment.	Result.
36	Mader, 'Bericht der k. k. Krankenanstalt, &c.,' Wien, 1882, p. 415	M., 34	History of headache, giddiness, and vomiting for 3 days	June 26th.—Headache, vomiting; vertigo with every movement; aching of neck; pupils equal; left palpebral fissure smaller than right; abdomen distended; apathetic and drowsy; intellect clear; pulse 48 to 52; temp. 36·7° C. to 37·4° C. July 1st.—Death	Leeches to mastoid	Death. Duration probably 1 week after onset of acute symptoms. P.M.—An abscess, the size of an egg, in left lobe of cerebellum, filled with fetid pus, and lined in places with pyogenic membrane. Ears healthy. No meningitis.
37	Matheson, 'Trans. Amer. Otolog. Soc.,' 1882 (quoted by Burnett, 'Archives of Otol.,' vol. xii, 1883, p. 178)	? 11	History of necrosis of left mastoid	March 14th.—"Suspicious head symptoms;" retinal veins over-full. March 16th.—Death after brief convulsions	—	Death. Duration of acute symptoms a few days. P.M.—Abscess containing about one ounce of fetid pus in left lobe of cerebellum. Pus between left tegmen tympani and dura, and in sheath of left fifth nerve.
38	Katz, 'Berliner Klinische Wochenschrift,' 1883, p. 36	? 38	Otorrhœa (after smallpox) for 12 years. Polypus removed from left ear 5 years ago	Sept. 20th, 1882.—Otorrhœa and pain; membrane scarcely visible owing to depression of superior wall of meatus; no mastoid tenderness; no facial paralysis. Sept. 28th.—Sudden severe pain in left occipital region. Middle of Oct.—Profuse left otorrhœa; pain behind left mastoid; rhythmic contractions of sterno-mastoid; pulse slow; paralysis of left external rectus; intellect clear. Died suddenly on day of admission	Syringing, carbolic oil plug; then ice, potassium bromide, and poultices	Death. Duration about one month (?). P.M.—An abscess, about the size of a walnut, in left lobe of cerebellum, adjacent to petrous bone. Tegmen tympani perforated by granulations. Lateral sinus normal. Cholesteatoma, about size of large walnut, projecting through petrous bone and into meatus.
39	Schulz, 'Deutsches Archiv für	M., 24	Right otorrhœa 10 years ago, with impaired hearing since. Pain and	Sept. 28th, 1883.—Pain; giddiness; paralysis of right facial nerve; no reaction of degeneration in facial muscles; right eye can just be	—	Death. Duration of symptoms about 44 days. P.M.—An abscess contain-

	klinische Medicin,' 1884, vol. xxxv, p. 477		giddiness for 3 weeks before admission	closed, but feebly; no conjunctival reflex on left side; knee jerks normal; reeling gait; sways when eyes are closed; no tenderness; pulse 54; temp. 38°—39·2° C. Later.—Vomiting; headache limited to right occiput; coma; death		ing 3 oz. of pus in anterior and superior part of right lobe of cerebellum. Anterior boundary of abscess cavity formed by petrous bone round internal auditory meatus. Tuberculous epididymitis.
40	Wilkins, 'Canadian Med. and Surg. Journ.,' 1886, vol. xiv, p. 516	M., 17	History of a fall, striking shoulder and head, 2 weeks before admission. Good health previously	June 10th.—General pains; headache; dizziness and vomiting; gait "unsteady;" pupils dilated; temp. 100° F. and less; pulse 70; no paralysis; insomnia; apathy. June 12th.—Retraction of head, with spasm of posterior muscles of neck. June 14th.—Pulse 120; pupils contracted; death from sudden respiratory failure	—	Death. Duration of acute symptoms about 18 days. P.M.—Abscess of right lobe of cerebellum, about the size of a filbert; it had burst into the fourth ventricle. Pus also in subarachnoid space, between flocculus and right side of medulla.
41	McMurray, 'Lancet,' 1887, vol. ii, p. 168	M., 22	Pain in right ear for 8 months, but no discharge	Pain in occiput; slight retraction of head; deafness of right ear; apathy. Internal strabismus of right eye; pupils dilated, right more than left. Gait inco-ordinate. Reflexes, motor and sensory condition not mentioned	No operation attempted	Death on day of admission. P.M.—Abscess in right lobe of cerebellum, extending from corpus dentatum to horizontal fissure. Superior petrosal sinus filled with firm clot. Right petrous bone roughened round internal auditory meatus.
42	Green, 'Boston Med. and Surg. Journ.,' 1888, vol. cxviii, p. 546	M., 26	History of discharge from right ear for 15 years, after kick from a horse. Pain in right temporal and parietal regions for 5 months	Vomiting; vertigo; partial paresis of right facial nerve. Four polypoid masses growing from meatus and tympanum (removed next day). Right pupil sluggish. Intellect clear. Temp. normal throughout. Delirium during last week of life; coma. Gait, reflexes, &c., not mentioned	—	Death. Duration of acute symptoms about 1 month. P.M.—Suppurative meningitis round internal auditory meatus on right side, and close to it in the cerebellum an abscess, about the size of a walnut, containing fetid pus. Caries of right tympanum.

No.	Reference.	Sex and age.	History.	State on admission and subsequently.	Treatment.	Result.
43	Smith, 'Journ. of the Amer. Med. Assoc.,' 1888, vol. x, p. 202	F., 15	History of otorrhœa since infancy	Headache; convulsions; drowsiness. No paralysis. Left meatus full of pus. Constipation. Later coma. Reflexes, &c., not mentioned	Syringing, aperients	Death. Duration about 15 days after onset of acute symptoms. P.M.—Anterior half of left lobe of cerebellum was converted into an abscess. There was a large cavity in the left petrous bone.
44	Edge, 'Brit. Med. Journ.,' 1888, vol. ii, p. 1399	? ?	Suppuration in middle ear	Frontal headache; no vomiting; no retraction of head. Loss of balancing power at onset of symptoms. Mydriasis. Tonic spasms more marked in limbs on side of lesion than in those on the opposite	Patient died one hour before time fixed for trephining	Death.
45	Buchan, 'Glasgow Med. Journ.,' 1889, vol. xxxi, p. 87	F., 63	About beginning of 1888 a cold, with running from right nostril, right eye watering, and involuntary winking of right eye; then severe occipital pain, gradually extending all over right side of head. Vomiting, with weakness of legs, ensued. Treated for biliousness	Admitted to Town Hospital May 15th, 1888. No paralysis; reflexes normal; pupils equal and active; hearing good. Even with assistance walked as if drunk; would have fallen backwards and to right if not supported. Slight vomiting; bowels loose. 3 weeks before death numb feeling in arms, and speech became thick, with slight difficulty in swallowing. A week later paralysis of lip and arms; no rigors; paralysis of sphincters. Coma 2 days before death	—	Death. P.M.—Five or six openings on posterior inferior left lobule of cerebellum, discharging yellowish, glairy fluid. On cutting into lobe a ruptured, encapsuled cavity was displayed, as large as a medium sized egg.
46	Bryden, 'Brit. Med., Journ.,' 1890, vol. i, p. 709	M., 23	History of occasional discharge from left ear for 7 years; this time for 14 days	Intense headache, chiefly left side; giddiness; occasional vomiting; constant twitching of left facial muscles; photophobia; restlessness; rigors. Pain in back and left side of head on day before death; unconscious; stertorous respiration. Death 8 hours after operation. Reflexes, &c., and condition of fundi not mentioned	First 4 days syringing and morphia, then trephined over left temporo-sphenoidal lobe, dura mater incised, and hypodermic needle	Death 27 days after onset of acute symptoms. P.M.—An abscess containing half an ounce of fetid pus in the outer and anterior part of left lobe of cerebellum. A little lymph over cerebral hemispheres. No caries of petrous bone.

					inserted in all directions without finding anything	
47	Chaix, 'Lyon Médical,' 1890, vol. lxiv, p. 160	M., 42	History of earache for 35 years from time to time, and of occasional deafness	Intense headache; swelling (due to abscess) over right mastoid; right otorrhœa; temp. 105° F. to 107·7° F. Death 4 days after admission	Incision of abscess over mastoid	Death. P.M.—Large intra-cerebellar abscess on right side. Petrous bone full of pus and necrosed.
48	Milligan and Hare, 'British Med. Journ.,' 1890, vol. i, p. 231	M., 14	Since scarlet fever, 6 years previously, there has been an occasional discharge from both ears. The discharge from right ear had suddenly stopped one week before seeking advice, and since then there has been severe headache	Pain on right side of head, most intense near right coronal suture; insomnia; drowsiness; nausea, but no vomiting. Marked optic neuritis on right side, slight on left. Paralysis of right side of soft palate and uvula; no facial paralysis. When standing with eyes shut, tendency to fall forwards. Pulse 80, feeble and intermittent. Reflexes not mentioned	After 2½ days' observation trephined over right temporo-sphenoidal lobe, and then over right cerebellar lobe; from latter, with a trocar, about 2 dr. of dark-coloured very fetid pus drawn off; drained	Death rather suddenly about 24 hours after operation. P.M. — Abscess cavity, about size of walnut, lined by distinct membrane, in right lobe of cerebellum. Petrous bone healthy.
49	Schwartze (reported by E. Braun), 'Archiv für Ohrenheilkunde,' vol. xxix, 1890, p. 163	M., 27	Symptoms for 5 weeks. Severe earache with profuse muco-purulent discharge from left auditory meatus	Acute suppuration left middle ear, with pain, swelling, and (?) fluctuation over left mastoid. Temp. 102·2° F. No mention of any symptoms pointing to intra-cranial disease. Nov. 18th.—Operation. Dec. 25th.—Pain on pressure over left occipital region. Dec. 27th.—Increased discharge of pus from wound; pain in neck and behind ear; evening pyrexia. Jan. 21st, 1887.—Operation. Jan. 22nd.—Vomiting, headache, vertigo. Feb. 7th.—Pain in neck and back of head; rigor. With good drainage all symptoms disappeared	Nov. 18, '86.—Left mastoid antrum opened and pus evacuated. Jan. 21, '87.—Opening in skull enlarged and a small perforation found in dura mater, which led directly to a cerebellar abscess	Recovery. N.B.—From the report it would seem that the diagnosis of cerebellar abscess was made in the course of treatment, and not in consequence of any symptoms of intra-cranial disease.

No.	Reference	Sex and age.	History.	State on admission and subsequently.	Treatment.	Result.
50	Carmichael, 'Trans. Med.-Chir. Soc. Edinb.,' vol. xi, n.s., 1891-2, p. 250	F., 2½	Left otorrhœa for 18 months. Left facial palsy 5 weeks. Drowsiness and vomiting 1 week	Pupils normal; early optic neuritis. Temperature normal until shortly before death, when it reached 103° F. Sensation undisturbed. "No paralysis." Reflexes not mentioned. Operation; collapse; death	Left temporo-sphenoidal lobe trephined; brain bulging. Aspirator removed some fluid from lateral ventricle, relieving tension	Death. Duration of acute symptoms about 8 days. P.M.—Limited meningitis about left internal auditory meatus, and an abscess 1½ × 1¼ inches in left lateral lobe of cerebellum. Caries of left tympanum.
51	Harrison, 'Lancet,' 1892, vol. ii, p. 763	M. ?	2 years ago left otorrhœa, and again after scarlet fever, 5 months ago. May 29th, 1892.—Acute pain in left ear and head; vomiting; no marked rigors. Improvement for a time, but symptoms recurred 14 days before admission	Admitted to Guard's Hospital July 22nd, 1892. Abdomen retracted; partly conscious; cerebration and speech not particularly slow; no paralysis; pupils equal and sluggish; no optic neuritis detected; no marked tenderness over mastoid or head; general tenderness; breath offensive; left otorrhœa; polypus in left meatus, which was removed; temp. 98·2° F.; pulse 56. It was decided to wait 3 days, and then explore temporo-sphenoidal lobe and cerebellum. Temperature never above normal, nor pulse above 64, till afternoon of July 24th, when 122; also coma. July 24th.—Operation. July 25th.—Rather better in morning, but in evening variable, rapid pulse; Cheyne-Stokes respiration. Death afternoon of 26th	Operation July 24th; no anæsthetic. Temporo-sphenoidal lobe explored; nothing found. Cerebellum explored; about 3 dr. of thick pus flowed away; cavity washed out	Death. Duration of acute symptoms about 18 days. P.M.—Non-circumscribed abscess in left lobe of cerebellum; no subdural abscess; no meningitis. Caries of petrous bone.
52	Dean, 'Lancet,' 1892, vol. ii, p. 250	F., 14	5 years' pain and discharge from right ear, on and off. 3 weeks before admission severe pain in right ear and around mastoid region	April 20th, 1892.—Admitted into London Hospital. Irritability; partial consciousness; skin over mastoid boggy, dusky, and painful; right meatus full of pus; double optic neuritis; knee-jerks normal; no ankle-clonus; temp. 99° F. 1st operation.—Improvement up to April 30th, then increased drowsiness; no motor weak-	Apr. 20, '92.—Pus evacuated from mastoid; lateral sinus found healthy. May 3.—Trephined 1 in. behind and ½ in. above external auditory meatus; temporo-sphenoidal lobe explored, nothing found; bone	Recovery. Duration of acute symptoms 3 weeks.

				ness; no anæsthesia; pulse 64; temp. 97·4° F., later 103·2° F. May 3rd.—Temp. 97·2°; pulse 56, irregular; respiration irregular. 2nd operation.—Immediately pulse 110; respiration regular; pupils moderately contracted. May 31st.—Discharged	chipped away backwards and downwards for ½ in.; dura mater incised, and on second insertion of trocar pus (1 oz.) flowed away. Uninterrupted recovery, with disappearance of optic neuritis	
53	Ballance, 'Clin. Journ.,' 1893, vol. ii, No. 23, p. 362	F., 13	Right otorrhœa 7 years. 3 weeks before admission severe pain in right ear, headache, shivering, sickness, and fever. During first 14 days of illness daily rigors. Swelling formed over mastoid, and was incised. During week preceding admission temperature lower, no shivering, but drowsiness, photophobia, and vomiting	On admission nearly unconscious; questions answered slowly; temp. 100° F.; pulse 90. Offensive pus from external auditory meatus, and incision. Mastoid very tender; midway between it and occipital protuberance a fluctuating swelling. Double optic neuritis. Crepitations in both lungs. Operation. Coma and death 3 days later	Operation immediately. Mastoid cleaned out; lateral sinus exposed, and found full of pus; internal jugular tied in two places and divided between. Lateral sinus found sloughed over cerebellum; latter explored, and 1 dr. of pus evacuated. Drainage, with removal of pus and clot in sinus, and usual dressings	Death. Duration of symptoms about 24 days. P.M.—Clot extended to torcular and across the middle line; abscess in postero-lateral part of right lobe of cerebellum, which had been drained; no meningitis. Pyæmic abscess in lungs, not elsewhere.
54	Ballance, ibid.	F., 21	Left otorrhœa for some years. Three months ago polypus removed from left ear; after removal giddiness and staggering with tendency to fall to left, for a short time. Four days ago another polypus removed in out-patient department, followed by pain in head, vomiting, and vertigo	On admission, drowsy; pain in left side of head; vomiting; giddiness; shivering; absolute deafness and facial paralysis on left side; left otorrhœa (offensive); no tenderness over mastoid; pupils and optic discs normal; knee-jerks normal; temp. 100° F. Next day, although drowsy, patient calls out with pain; slight retraction of head; slight cyanosis; lies on right side always; turned somersault in bed; temp. 98° to 101° F.; pulse 80, full and soft. Operation. In evening pain better; less drowsiness; pulse 100, stronger. Two days later, return of headache, vertigo, and vomiting; rotary nystagmus; knee-jerks, pupils, and optic discs normal; temp. 97°; operation; death	Operation 1.—Cleaning out mastoid; exploration of cerebellum; no abscess found. Operation 2.—No anæsthetic; cerebellum again explored; on passing pus-seeker deeply towards apex of petrous bone about 2 dr. of fetid pus escaped. Death about one hour later	Death. Duration of acute symptoms 4 days. P.M.—Abscess, which had been drained, in inner part of left lateral lobe of cerebellum; 7th and 8th nerves softened and discoloured; no meningitis; no venous thrombosis.

No.	Reference.	Sex and age.	History.	State on admission and subsequently.	Treatment.	Result.
55	Ballance, ibid.	M., 22	2 years ago hit by stone on right ear: offensive otorrhœa followed. Polypus removed 5 months ago: for a few days subsequently pain in head and vertigo; ear neglected in spite of fetid discharge. 1 month ago another polypus removed. 10 days before admission general pains, vomiting, shivering, and fever. 7 days before admission facial paralysis, extreme vertigo with staggering gait	On admission pupils normal; discs normal; weakness of internal recti; occasional lateral and vertical nystagmus; right otorrhœa with deafness; no tenderness over mastoid or elsewhere; complete right facial paralysis; no loss of power or sensation in the limbs; knee-jerks slight; no patella or ankle-clonus; gait reeling, leans to right in walking; dull and heavy. 4 days later, operation. Following day, right optic neuritis. 3 days later, double optic neuritis; right external rectus completely paralysed; no vomiting; less headache; right pupil smaller than left; complete anæsthesia of right half of forehead, nose, and right cheek; pulse 100; temp. 98·4° F. to 100·4° F. 9th day after admission, operation. Later right fifth nerve completely involved, and death 7 days after second operation	Operation1.—Mastoid and petrous bones cleared out. 5 days later, Operation 2: cerebellum explored, and pus seeker passed in 2 inches towards apex of petrous bone, but nothing found	Death. Duration of acute symptoms 16 days. P.M.—Some basal meningitis. right flocculus contained abscess ⅜ inch by ½ inch; pus seeker had gone within ¼ inch of this; caries of right tympanum; small subdural abscess on posterior aspect of petrous bone.
56	MacEwen, 'Pyogenic Infective Diseases of Brain and Spinal Cord,' p. 197	M., 17	Inflammation of left ear with abscess formation 11 years ago; otorrhœa ever since When 11 years old another left mastoid abscess; three months ago a third abscess; serious symptoms for last three months, viz. occipital headache, drowsiness, vomiting; fit in third week of illness followed by blindness; pupils dilated and insensitive to light; paralysis of left side, two months;	Admitted May 15th, 1889.—Semi-conscious; slow, shallow respiration; slow, feeble pulse; incontinence of urine and fæces; frequent yawning; patella reflex absent on left, slight on right; neck muscles rigid, but no retraction; superficial reflexes absent; lower limbs weak but not paralysed; left arm rigid and absolutely paralysed; double optic neuritis; decomposing pus in left ear. Operation.—Respiration and pulse immediately improved; control of bladder within 24 hours; improvement of intelligence in 48 hours; knee-jerks present and paralysis less on third day; eyesight normal in 6 weeks; traces of neuritis after eleven weeks	Operation.—Left mastoid cleared out; sigmoid sinus found covered with granulation tissue; a little pus between skull and dura; whilst reflecting latter, abscess was entered and 4 oz. of pus escaped; cavity washed	Recovery.

			sphincters paralysed; several shivering fits		out and decalcified bone drainage-tube inserted	
57	MacEwen, ibid., p. 203	M., 52	Influenza in Feb., 1891. Soon after noises and throbbing in left ear, with pain and purulent otorrhœa. In June an incision made over left mastoid, and two further operations in Oct. and March, 1892. After 2nd operation severe pain in forehead and occiput. Insomnia and occasional difficulty in comprehension since June, 1891. Two rigors, with a week's interval, in May, 1892	May, 1892.—Sinus, discharging much pus, over left mastoid; great pain over occiput and forehead; slight double optic neuritis, more on right; no motor or sensory paralyses; difficulty in understanding questions, although coherent in speech; operation (cerebellar). Absolute word-deafness for 8 days and mind-blindness for 4 days after operation. In 3 weeks clear in both respects	Operation 1.—Old mastoid wound opened up; pus and granulation tissue in antrum removed. Operation 2.—½ oz. pus found in cerebellum under dura, which was covered by granulations. Between dura and skull was pus; sigmoid sinus thrombosed, but not suppurating. Operation 3.—A subdural abscess over first left temporal convolution and angular gyrus, containing 3 oz. pus, opened	Recovery.
58	MacEwen, ibid., p. 207	M., 29	Right otorrhœa, for 14 days, 10 years ago. Nine weeks ago, after diving, again right otorrhœa with pain in ear and head for 5 days. Seven weeks ago, again pain and swelling behind right ear. Three rigors; giddiness on stooping; said to have squinted	On admission; œdema and redness over right mastoid. Swelling and tenderness over whole course of right internal jugular vein. No ocular symptoms; marked vertigo; unsteady gait; frequent yawning; head retracted; pulse rather slow and feeble; mind somewhat excited. Operation. Recovery	Operation.—Mastoid antrum, cells and middle ear cleaned out. Lateral sinus contained disintegrated clot; on removing latter, and inserting a probe, a cerebellar abscess containing 3 dr. of pus was found and opened up	Recovery.

No.	Reference.	Sex and age	History.	State on admission and subsequently.	Treatment.	Result.
59	MacEwen, ibid., p. 209	M., 38	Left facial paralysis and deafness since early childhood. No suppuration for many years. Dec. 15th, 1891.—Pain in right ear, soon extending to vertex, occiput and right side of neck; deafness; since then never free from pain, which became worse on Feb. 11th, 1892	Feb. 13th, 1892.—Pain in right ear, vertex, occiput and right side of neck; tenderness of upper third of right jugular vein, and apex of posterior triangle of neck; motor power (except for left facial palsy) normal; sensations and reflexes normal; slight optic neuritis in both fundi, especially the right. Pulse 55. Temp. 99° F. Operation. Recovery	Operation, Feb. 15th. —Mastoid opened and fetid pus evacuated; perforation found leading into sigmoid groove; dura opened internal and anterior to sigmoid sinus, and 3 dr. of pus escaped from cerebellar tissue	Recovery.
60	MacEwen, ibid., p. 210	M., 19	Left otorrhœa since measles 12 years ago; mastoid abscess on left side 3 years ago; one month ago vomiting, dizziness, and pain for a few days; 6 days ago pain, which has persisted since, behind ear and in forehead; no history of rigor	On admission, Aug. 14th, 1890, pain in head, chiefly of left mastoid and forehead, not increased on tapping; no swelling over jugular vein; no paralysis; no staggering; knee-jerks a little increased and ocular muscles normal; temp. 101·4° F., ranging from 99·2° to 103·8° F.; herpes facialis; optic neuritis in left eye. Later, right pupil became dilated, and eye inflamed; slight left facial paralysis; slight retraction of head and rigidity of back; delirium and unconsciousness; left conjugate deviation; temp. just before death up to 108° F.	Mastoid cells cleared out on Aug. 19th	Death. P.M.—A ruptured abscess in left lobe of cerebellum, rupture close to sigmoid sinus; ventricles inflamed and contained pus; meningitis in middle and posterior fossæ and all down spinal cord.
61	MacEwen, ibid., p. 212	F., 4⅔	Left otorrhœa during scarlet fever in May, 1890. Also nervous symptoms, with amaurosis and stabile mydriasis; an abscess formed behind left ear and burst; a month later sight returned. Dec. 2nd, 1890.—Frontal headache; fre-	On admission, two days before death; retraction of head and arching of back; right conjugate deviation; double optic neuritis, more marked on left side; pupils widely dilated and fixed; no paralysis; knee-jerks exaggerated; difficult swallowing; pulse feeble; temperature subnormal	—	Death. Duration of acute symptoms 15 days. P.M. — Leptomeningitis of cord; no pus; abscess in left lobe of cerebellum extending into pons, and communicating with exterior of skull through sigmoid groove by an erosion in the dura mater;

			quent vomiting; slight retraction of head; sharp screaming; difficult articulation. Dec. 11.—Fits (during which opisthotonos, rigidity of arms and legs, turning up of eyes), recurring at short intervals			left lateral sinus obliterated and perforated in two places. "Probably the cerebellar abscess was formed during the first illness, and had drained through mastoid. The second attack was meningeal."
62	MacEwen, ibid., p. 215 (Dr. F.'s case)	M., 11	Right otorrhœa for 10 years	Dec. 4th, 1891.—Great pain in right ear; increased discharge; drowsiness; erysipelatous condition of right side of face. Temp. 101° F. to 102° F. Five days later no erysipelas; temp. normal; convergent strabismus; pain on pressure over right mastoid; slight papillitis. Death	Incision of abscess over mastoid with escape of much fetid pus	Death. Duration 21 days. P.M.—Mastoid and middle ear disease; old-standing thrombosis of lateral sinus; in right lobe of cerebellum an encysted abscess cavity the size of a walnut, communicating with a perforation in the dura and sigmoid groove, serous leptomeningitis of cortex; pus over base of brain and spinal cord; "Perhaps the abscess had existed for years, discharging through middle ear."
63	MacEwen, ibid., p. 216 (reported as cerebellar abscess)	M., 3	Right otorrhœa, after measles, for 2 years; soon after, abscess behind right ear; opened, and fetid pus evacuated; discharge from opening and from ear for 9 months; right facial paralysis, complete for 3 months; has seemed ill, and vomited occasionally for 14 days	On admission, lay curled up in bed; pupils variable, often unequal; sight bad, subsequently absolute blindness; fundi congested; vomiting frequent; loss of power of swallowing; loss of equilibrium; retraction of head and rigid neck muscles; temp. subnormal, rising to 102° F.; pulse intermittent; death 9 days later	Sinus at back of ear opened up; petrous bone found much excavated and dura exposed	Death. Duration about 23 days. P.M.—A superficial abscess in middle lobe of the cerebellum, which had burst into the ventricle and had no anterior wall; tubercular meningitis around Sylvian fissure; old caseated tubercle in lungs.

No.	Reference.	Sex and age.	History.	State on admission and subsequently.	Treatment.	Result.
64	Kenefick, 'Boston Med. and Surg. Journ.,' 1893, vol. cxxix, p. 144	M., 23	History of deafness	Pain in top and left side of head; vertigo; apathy; deafness; temp. rose gradually from 97° to 104° F.; rigidity of neck; delirium towards the end; died suddenly; no mention of reflexes, &c.; case at first thought to be one of enteric fever	—	P.M.—"On dividing the cerebellum at the base, a cerebellar abscess of the size of a billiard-ball was found."
65	Heiman, H., translated by Dr. W. A. Holden, 'Archives of Otology,' vol. xxii, 1893, p. 38	? 24	Periodic otorrhœa (right) since childhood. Aug. 20th.—Discharge commenced, continued 4 days, and ceased with commencement of severe pain on right side of head	Aug. 26th.—Old dry perforation in right membrana tympani; mastoid not painful; air and bone conduction of sound preserved; left ear normal; percussion over right temporal and occipital regions painful; pupils active; fundus normal; sitting up and walking increases headache and causes nausea and vomiting; mind clear; patient weak and apathetic; breathing regular; temp. 101°; pulse 90; spleen slightly enlarged; no mention of paralysis, vertigo, or strabismus; ? cerebral abscess or circumscribed meningitis; cerebellar abscess not suspected. Aug. 27th.—Temp. 102·3°; pulse 90; resp. 16; intermittent piercing pain in right temporal region; tip of right mastoid sensitive; no otorrhœa; giddiness on rising in bed; temp., p.m., 102·9°; pulse 90; resp. 16; pain severe over right side of head; vomiting; delirium; convulsion; Cheyne-Stokes' respiration. Death early Aug. 28th	Leeches to mastoid; ice-bag to head; Infus. Sennæ	Death 4 days after onset of acute symptoms. P.M.—Right lobe of cerebellum adherent at some points to dura mater; two small fistulous openings on its surface leading to encapsulated abscess size of pigeon's egg, filled with offensive green pus; softening of surrounding cerebellar substance; inner surface of dura over petrous bone coated with offensive pus; considerable subdural abscess, communicating with a broken-down thrombus in transverse sinus; surface of tegmen tympani rough, with two openings leading to tympanic cavity; no disease of mastoid.
66	Koch, 'Berliner klinische Wochenschrift,' 1893, p. 1096	F., 20	History of disease of right ear	Sept. 2nd.—Headache; vomiting; obstinate constipation (for 10 days); mind apathetic but clear; temp. and pulse normal; slight rigidity of neck; no tenderness of head; no paralysis; no convulsions; right pupil larger than left; no optic neuritis; no vertigo;	Sept. 3rd.—Mastoid opened and scraped out on right side; lateral	Death on Sept. 12th. Duration of acute symptoms 10 days. P.M.—A small abscess as large as a pigeon's egg found in right lobe of cerebellum,

				perforation of right membrane and polypus in right tympanum; no record of reflexes, power, or sensation. Later, unconsciousness and stertorous breathing; operation partially relieved symptoms; patient died rather suddenly 9 days later; abscess not diagnosed	sinus not thrombosed	surrounded by a soft wall.
67	Koch, loc. cit.	M., 19	Discharge from left ear 5 years; attack of vomiting and giddiness of 4 days' duration 1 year ago	Sept. 10th.—Headache, not localised; vomiting; vertigo; nystagmus of both eyes; reeling gait with pronounced tendency to fall to the right; swaying even when eyes are closed; no optic neuritis; no paralysis; no convulsions; temp. 37·3° C. to 39·3° C.; pulse 76. Sept. 13.—Operation. Sept. 17.—Rigor. Sept. 18.—Operation. Sept. 19.—Meningitic symptoms, gradually increasing till death; reflexes not mentioned; abscess diagnosed after Sept. 18th	For 2 days syringing. Sept. 13.—Mastoid and tympanum cleared out on left side. Sept. 18th.—Trephining over lateral part of left occipital bone, above and below lateral sinus; dura not incised, but exploration of cerebellum and temporal lobe with trocar gave exit only to a few drops of serum. Sept. 19th.—Prof. Köhler put trocar in cerebellum, also without result	Death on Sept. 26. Duration of acute symptoms 16 days. P.M.—Abscess size of walnut in anterior and inferior part of left lobe of the cerebellum; basal meningitis; perforation in wall of sigmoid sinus, which contained clot; caries of internal ear.
68	Drummond, 'Lancet,' 1894, vol. ii, p. 190	F., 9	Right otorrhœa for some years. A few days before admission there had been headache, vomiting, paralysis of right arm and convulsions on right side	Offensive discharge from right ear; right arm paralysed; right angle of mouth weak; right leg weak; right-sided convulsions every hour or more frequently, spasm beginning in the face, extending to right arm, and occasionally to right leg; conscious between fits, but aphemic; early optic neuritis; reflexes not mentioned. Operation.—After trephining, fits were less numerous	Trephined over *left* temporo-sphenoidal lobe without result; trephined over *left* arm-centre, and finally *left* lobe of cerebellum explored without result	Death 7 days after operation. P.M.—An abscess holding 1 oz. of pus found in right lobe of cerebellum near the surface, ¾ in. from the medulla; both tympanic cavities extensively diseased; rest of brain normal.

No.	Reference.	Sex and age.	History.	State on admission and subsequently.	Treatment.	Result.
69	Harrison, 'Lancet,' 1894, vol. ii, p. 795	M., 20	Discharge from right ear for a few days with irregular fever, at the beginning of Feb., 1894; symptoms subsided and patient was apparently convalescent on Feb. 11th, but on Feb. 23rd symptoms again increased	Feb. 23rd.—Supra-orbital headache on right side; no discharge now from ear; pupils equal, but sluggish; photophobia; cerebration slow; articulation slurring; later on, vomiting; temp. 100° F., later subnormal; pulse fell from 84 to 68; reflexes, &c., not mentioned. Mar. 1st.—Operation. Subsequently cerebration quicker, and articulation improved; temp. 101·6° F.; pulse 112; no paralysis, but twitchings on right side of face. Four days later, drowsiness deepening into coma	March 1st.—Trephined over right temporo-sphenoidal lobe, dura incised and a canula introduced without result; right lobe of cerebellum then exposed by another trephine hole, explored, and several drachms of non-offensive pus escaped	Death 7 days after operation. P.M.—Meningitis over left fissure of Rolando and over base; cavity in right lobe of cerebellum size of large walnut; small patch of necrosed bone close to junction of superior petrosal with lateral sinus; right lateral sinus occluded with organised lymph; no evidence of pyæmia.
70	Winter and Deanesly, 'Lancet,' 1894, vol. ii, p. 1338	M., 16.	Deafness occasionally for 6 months; no discharge until present illness; headache and vomiting for a few days at Christmas, 1893. Jan. 20, 1894, earache and severe pain in head and neck, Jan. 23, vomited. Jan. 25, discharge of pus from left ear. Feb. 1, could not sit up, and lay constantly on	Feb. 6, 1894,—Patient lies on right side with body flexed; drowsiness and irritability; pain in forehead and left parietal region; neck muscles rigid; head and eyes turned to right; pupils equal, moderate size, react to light; nystagmus on looking upwards; left palpebral fissure wider than right; photophobia; optic neuritis on left side; superficial reflexes and knee-jerks normal; no loss of control of sphincters; pulse 60; temp. 97° F. Feb. 7.—Respiration temporarily Cheyne-Stokes. Feb. 8.—Increased drowsiness. Operation. April 3.—No signs whatever remaining ex-	Feb 8, 1894.—Trephining by Dean's method. Left temporo-sphenoidal lobe explored; a little clear fluid drawn off from lateral ventricle; on thrusting trocar into left lobe of cerebellum several drachms of inodorous pus flowed away through the canula; drainage tube left in; consciousness partly recovered on operating table; temp. 12 hours later 99·2° F., on 3rd day 100·4° F. "Five hours after the operation he turned of his own accord on to the *left*	Recovery.

			right side, curled up; photophobia. Feb. 3.—Strabismus: "both eyes turned upwards and inwards.	cept giddiness when head is turned suddenly. Quite well	side, having previously lain exclusively on the *right*," and the conjugate deviation disappeared. Headache, drowsiness, and irritability persisted for 4 days. Wound healed by fifth week.	
71	Murray, 'British Medical Journal,' 1895, vol. i, p. 9	M., 11	Discharge from right ear 3 weeks	June 2nd.—Headache; vomiting; frontal headache; no rigors; no convulsions; painful swelling over right mastoid; double optic neuritis; temp. 100° F.; operation. June 3rd.—Temp. 98°—100° F.; pulse 88—90, irregular. A few days later, again operation. 2 days later, worse; sighing respiration; pulse 40—60. Again operation, and recovery. No mention of general motor or sensory symptoms	Abscess over mastoid opened; mastoid opened and cleaned out, also sigmoid sinus; former contained non-offensive pus, the latter was thrombosed. June 25th.—Cerebellum explored; 4 to 6 drachms of sweet pus escaping; pulse rose from 20 to 100; temperature rose from 97° to 99·6° F.	Recovery.
72	Stanley, 'Brit. Med. Journ.,' 1895, vol. i, p. 370	M., 31	Pain, with redness and swelling behind left ear, 14 years previously; no discharge	Deafness of left ear; headache; some vomiting; double optic neuritis; some internal strabismus; slight swaying to left side in walking; died suddenly of respiratory failure	—	P.M.—Abscess in left lobe of cerebellum.
73	Gamgee, 'Brit. Med. Journ.,' 1895, vol. i, p. 370	? 11	Left otorrhœa for 8 years; swelling over mastoid 14 days; vomiting 1 day	On admission, great retraction of head; patient curled up on right side; pus in left ear; no swelling over internal jugular vein; no paralysis; semi-coma; double optic neuritis; temp. 101° F., pulse 100. Operation. Death twenty minutes later from respiratory failure	Operation.—Mastoid antrum found full of pus; temporo-sphenoidal lobe explored, nothing found; cerebellum not explored as patient ceased to breathe	Death. P.M.—Abscess of left lobe of cerebellum. No meningitis.

No.	Reference.	Sex and age.	History.	State on admission and subsequently.	Treatment.	Result.
74	Thomas, 'Lancet,' 1895, vol. i, p. 1249	F., 15	Right otorrhœa for several years. Nov. 23rd, 1894. —Headache and vomiting; otorrhœa ceased, but returned on Nov. 27th	Admitted into Royal South Hants Infirmary, Nov. 29th, 1894; lies on back; knees drawn up; eyes half closed; complains of intense pain at back of head, but has general hyperæsthesia; no retraction of head, but neck muscles rigid; no hardness along internal jugular vein; no optic neuritis; pupils equal and react to light; knee-jerks normal; polypus in right meatus; no facial or other paralysis; temp. 104° F.; pulse 104; gait not mentioned. 30th.—Operation. Temperature in evening 104·4° F. Dec. 5th.—Death. Pulse rapid all through illness; temperature between 100° and 103° F.	Operation, July 30th.—Polypus removed; mastoid antrum cleared out	Death. Duration of acute symptoms 13 days. P.M. —A large abscess in right lobe of cerebellum near the surface; a little yellow lymph in inter-peduncular space; sinuses all healthy.
75	Anderson, W. W., 'St. Thos. Hosp. Gaz.,' No. 8, Nov., 1895, p. 119	M., 9	Intermittent right otorrhœa for 4 years; each return preceded by pain. No discharge for last 2 years until 1 week ago. 3 weeks ago pain right side of head. For last week vomiting and constipation	Oct. 18th.—Offensive right otorrhœa; granulations in middle ear; tenderness over mastoid; drowsiness, but able to answer intelligently. Oct. 21st.—Much pain. Oct. 22nd.—Pain worse; head retracted and rigid. Oct. 23rd.—Optic disc said to be normal. Oct. 29th.—Semi-comatose; violent and sudden attacks of pain, with screaming; temperature subnormal; pulse 60; slight weakness left side of face; no difference in limbs; knee jerks much exaggerated; constipation; vomiting. Operation. Symptoms relieved at once; temp. reached 101°, and then it and pulse became normal; *optic neuritis* noted. Oct. 29th.—Pulse weak and irregular. Oct. 31st.—General condition good. Nov. 7th.—Drainage tube removed. Nov. 8th —Vomiting; *right* knee jerk brisk. Nov. 11th.—Pain, vomiting, drowsiness; cerebellum again explored, but without result, at 7.30 p.m.; pulse 70, very irregular; vomiting. Nov. 12th.—Rigor; temp. 105°; coma; death	Oct. 24th.—Trephined; abscess evacuated from inner and fore part of right lateral lobe of cerebellum. Nov. 11th.—Second operation without result	Recovery from first operation. Death about 7 weeks after onset of acute symptoms. P.M.—First abscess completely drained. A second abscess, thick-walled, and apparently older, found below and inside the first.

76	Stabb, E. C. Oral communication. Jan. 1895	M., 15	O.P. St. Thomas's Hosp., left deafness 1892; left otitis media, 1893	Admitted to St. Thomas's Hospital, Jan. 1, 1894; left mastoid abscess; rigor; vomiting; incision, no bare bone detected; drowsiness; no optic neuritis. Jan. 4.—Antrum opened, pus found; lat. sinus sloughing, not thrombosed. Jan. 6.—Drowsiness; several "fits"; rigidity; unconsciousness. Jan. 12.—Temp. 102°-103°; "fits" less frequent; no optic neuritis; evacuations passed involuntarily. Jan. 20.—Temp. 97°-100°; cerebellum explored, 2 dr. to 3 dr. pus evacuated. Jan. 31.—Well-marked double optic neuritis. April 4.—Well; "eyesight perfect"	Jan 1.—Mastoid antrum opened. Jan. 20.—Abscess of cerebellum evacuated	Recovery.
77	Acland and Ballance, 'St. Thomas's Hosp. Rep.,' 1894, p. 133, London, 1895	M., 15	Measles 9 years previously, complicated by right otitis media with suppuration, which continued up to admission; 5 weeks previously headache, staggering, which 2 weeks previously increased; vertigo; 4 days previously vomiting; lateral movement of eyeballs	On admission May 10th.—Severe frontal and occipital headache; vertigo; diplopia; drowsiness; cerebral vomiting; lies curled up on left side; general flexion of limbs. Both eyes deviated to left; early double optic neuritis; fetid otorrhœa (right ear); weakness of right arm; slight weakness both lower limbs; right knee-jerk brisk; temp. subnormal; pulse slow; bowels constipated; breath offensive. 11th.—Operation. 12th.—Improvement. 27th.—Operation, serious symptoms having returned for 7 days. 30th.—Convalescence uninterrupted from this date	May 11th.—Operation. Half an ounce of pus evacuated from anterior part of right lobe of cerebellum. May 27th.—Operation. Blood collection evacuated from posterior part of right lateral lobe of the cerebellum	Recovery.

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MEDICAL REPORT.

1894.

By CHARLES R. BOX, M.D., B.S., B.Sc.Lond., F.R.C.S.

Table I.—*General Statement of Medical and Surgical Patients.*

	Males.	Females.	Total.
Number of patients in Hospital, Jan. 1st, 1894 ...	202	161	363
„ „ „ Dec. 31st, 1894 ...	205	156	361

„ „ discharged or died during 1894:

	Males.	Females.	Total.	Rate per cent.
Cured	1985	1350	3335	61·55
Relieved	585	576	1161	21·42
Unrelieved or other causes ...	195	188	383	7·06
Died	334	205	539	9·94
Total	3099	2319	5418	

Average number of days of each medical patient's stay in hospital—20·3.
„ „ surgical „ 22·09.

Table II.—*General Medical Statement.*

Number of Medical Beds[1] 171

	Males.	Females.	Total.
Number of patients in Medical Wards, Jan. 1st, 1894 ...	66	54	120
„ „ admitted during the year 1894 ...	954	836	1790
Total	1020	890	1910
„ „ in Medical Wards, Dec. 31st, 1894...	69	54	123
„ „ treated to a termination during 1894	951	836	1787

„ „ discharged or died during 1894:

	Males.	Females.	Total.	Rate per cent.
Cured	453	425	878	49·13
Relieved	198	251	449	25·12
Unrelieved or other causes ...	85	45	130	7·27
Died	215	115	330	18·46
Total	951	836	1787	

Average number of days of each patient's stay in hospital—20·3.

[1] This does not include 21 beds in Adelaide Ward, the statistics of which are given in the Report of the In-patient Department for Diseases of Women.

TABLE III.—*General*

DISEASE.	Number of cases.			Age.							Duration of residence.							
	Total.	M.	F.	Under 5	5–10	–20	–30	–40	–50	–60	Above 60	Under 1 week.	Wks. 1–2	Wks. 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Above 1 year.
I. GENERAL DISEASES.																				
Measles	11	10	1	4	6	...	1	...	...	...	...	2	2	5	2	...	...	...	...	...
Scarlet fever	32	18	14	13	7	4	5	1	2	...	...	1	...	4	20	6	1	...	...	...
Influenza	17	8	9	...	...	3	10	4	...	...	...	5	10	2	...	...	...	...	...	...
Enteric fever	56	30	26	2	6	25	12	11	...	...	...	5	6	7	24	13	1	...	...	...
Erysipelas	21	8	13	2	4	1	6	3	3	...	2	4	7	4	5	1	...	...	...	...
Diphtheria	112	53	59	63	34	7	6	2	...	...	...	35	29	25	15	8	...	...	...	...
Diphtheritic paralysis	5	4	1	1	1	1	2	...	...	...	...	...	2	...	3	...	...	...	...	...
Fever of doubtful origin	12	6	6	5	2	3	2	...	...	...	...	4	4	4	...	...	...	...	...	...
Pertussis	4	2	2	1	3	...	...	...	...	...	...	...	2	2	...	...	...	...	...	...
Ague	1	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...
Pyæmia	2	2	...	...	...	...	...	1	1	...	...	1	1	...	...	...	...	...	...	...
Septicæmia	1	...	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...
Syphilis	5	3	2	1	1	...	2	1	...	...	...	...	...	2	2	...	...	1	...	...

Table of Diseases.

Cured.		Relieved.		Unrelieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
8	1	...	...	...	...	2	...	2 cases originated in hospital. Broncho-pneumonia occurred in 3, otitis media in 1, whilst 1 was complicated by varicella and another (fatal) by diphtheria. The second fatal case had œdema of lungs and punctiform hæmorrhages in the pia arachnoid.
15	11	...	..	1	...	2	3	For cases originating in hospital see Table V. The unrelieved patient was transferred to a fever hospital. In 1 fatal case there was no P.M.; in the others the scarlet fever complicated tuberculous peritonitis, enteric fever, diphtheria, and in one patient it followed amputation of the breast for carcinoma.
8	9	...	...	...	...	...	...	Dry pleurisy complicated 1 case; 3 cases occurred in nurses, and 1 in a ward maid.
19	22	...	...	...	1	11	3	See Special Abstract.
7	11	...	...	...	...	1	2	All facial. Right hemiplegia, probably due to hæmorrhage, occurred in one patient whilst under observation. Of the fatal cases noisy delirium and hyperpyrexia occurred in 2, and the third died in a typhoid condition. A P.M. was not obtained on latter.
29	35	...	...	...	...	24	24	Includes 3 doubtful cases. Intubation in 1 case only, as aid in leaving out tracheotomy tube. Tracheotomy in 55 cases with 37 deaths. 3 contracted scarlet fever in hospital; all recovered. Of these 2 had albuminuria, 1 paralytic symptoms, and 1 caries of superior maxilla and hip disease. 1 developed scarlet fever 3 days after admission and died with endocarditis and tubal nephritis. 1 contracted measles and recovered. Of cases with evidence of nasal infection 2 recovered, 8 died. Antitoxin treatment adopted in 3 cases only, all tracheotomies; 1 recovered and 2 died. Of the non-fatal cases: albuminuria in 21, paralytic symptoms in 6, bronchitis in 10, diarrhœa in 1, severe epistaxis in 1. Of the fatal cases: albuminuria in 9, paralytic symptoms in 9, in 1 case proving fatal 49 days after tracheotomy; bronchitis in 7, broncho-pneumonia in 14, collapse of lung in 6, empyema in 1, cellulitis of neck in 2, acute nephritis in 1, congenital obstruction of pulmonary artery in 1.
2	1	1	...	1	...	...	...	1 case was doubtful (unrelieved).
6	6	...	...	...	...	...	...	In 1 malarial and in 2 enteric fever suspected.
...	...	2	2	...	...	...	...	Bronchitis in 1, broncho-pneumonia in 3.
...	...	1	...	...	...	...	...	
...	...	...	...	...	...	2	...	In 1 followed cellulitis of leg, in other cause obscure. See Special Report.
...	...	...	...	...	...	...	1	Puerperal.
...	...	3	2	...	...	...	...	4 cases congenital, 1 acquired. Of former, in 1 hæmatemesis, in 1 hæmoptysis and possibility of phthisis, in 1 deafness and keratitis.

TABLE III—

DISEASE.	Number of cases.			Age.								Duration of residence.								
	Total.	M.	F.	Under 5	5–10	–20	–30	–40	–50	–60	Above 60	Under 1 week.	Wks. 1–2	Wks. 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Above 1 year.
I. GENERAL DISEASES—*continued.*																				
Acute rheumatism	112	67	45	1	12	38	38	12	7	4	...	9	29	48	25	1	...	...	...	...
Chronic articular rheumatism	8	6	2	...	...	2	1	2	1	2	...	1	1	4	2	...	...	...	...	...
Gonorrhœal rheumatism	6	5	1	...	...	...	5	...	1	...	...	...	1	2	2	1	...	...	...	...
Gout	2	2	...	...	...	...	...	...	1	1	...	...	1	1	...	...	...	...	...	...
Rickets	7	4	3	6	1	...	...	...	...	...	...	3	2	1	1	...	...	...	...	...
Myxœdema	7	...	7	...	...	...	...	3	2	2	...	1	...	3	3	...	...	...	...	...
Cretinism	2	1	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	2	...	...
Diabetes mellitus	10	7	3	...	...	4	...	3	3	...	...	6	...	...	3	1	...	...	...	..
Diabetes insipidus	1	...	1	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...
Purpura	5	2	3	2	1	...	1	1	...	...	...	3	2	...	...	...	...	...	...	...
Simple anæmia	34	4	30	2	1	7	21	2	1	...	...	9	9	9	5	2	...	...	...	...
Pernicious anæmia	2	2	...	...	...	...	...	1	1	...	...	...	...	...	1	...	...	1	...	...
Leucocythæmia	4	3	1	...	...	...	...	1	2	...	1	2	1	...	1	...	...	...	...	...
Lymphadenoma	1	1	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...
General tuberculosis	8	4	4	7	1	...	...	...	...	...	...	5	3	...	...	...	...	...	...	...
Disseminated sarcomata	1	1	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...

continued.

Cured.		Re-lieved.		Unre-lieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
67	42	...	2	...	...	...	1	57 were cases of first attack, and in 25 of these there was evidence of mitral disease, and in 2 of mitral and aortic disease. Pericarditis occurred in 4, erythema nodosum in 2, and chorea in 2. 40 were cases of second attack, and of these there was evidence of mitral disease in 23, of mitral and aortic disease in 4, and of pericarditis in 4. Pneumonia occurred in 2, albuminuria in 3, delirium tremens in 1, transitory glycosuria in 1, and erythema nodosum in 1. 5 were cases of third attack, in 1 there was mitral disease, and in 1 psoriasis. Of cases of fourth or later attack there were 10, and of these there was mitral disease in 8, perichondritis in 1, and adherent pericardium in 1. The fatal case was a first attack, and complicated by pericarditis.
...	...	5	1	1	1	..	...	Pericarditis in 1.
1	...	4	1	...	...	...	...	Iritis and cystitis in 1. Orchitis in 1.
2	...	...	...	...	...	...	...	Transient albuminuria in 1.
...	...	3	2	...	...	1	1	Of non-fatal cases, convulsions in 1, diarrhœa and vomiting in 1, otitis media in 1. Of fatal cases, pulmonary collapse in 1, diarrhœa and vomiting in 1.
...	6	...	...	...	...	...	1	Of non-fatal cases, phthisis in 1, albuminuria in 1. The fatal case had double basal pneumonia and albuminuria; no P.M.
...	...	1	1	...	...	...	...	The child improved much, the youth but little, under thyroid treatment.
...	...	2	3	...	...	5	...	Of non-fatal cases, in 1 pruritus vulvæ, in 1 semi-coma, and in 1 prolapse of pelvic floor. Of fatal cases, pancreas small and tough in 1, extensive tuberculosis of lung in 1, and in 2 no P.M.
...	...	...	1	...	...	...	...	Coma, relieved by saline infusion.
1	1	...	1	...	...	1	1	Pregnancy in 1. In 1 fatal case no P.M., in other marked rachitic changes and hæmorrhages into liver, heart, kidneys, and at base of brain. See Abstracts.
2	26	2	4	...	...	..	...	1 possibly gastric ulcer, in 2 splenic enlargement, venous thrombosis in 3, albuminuria in 1, erythema nodosum in 1, temporal neuralgia in 1, organic mitral disease in 2.
..	...	...	...	...	...	2	...	See Special Abstracts.
...	...	...	...	...	1	3	...	Unrelieved patient discharged at own request. Of fatal cases: no P.M. in 1; for others see Special Abstracts.
...	...	...	...	...	...	1	...	P.M.—General glandular enlargement, cirrhosis of liver, infarction of spleen, and ascites.
...	...	...	...	...	...	4	4	Otitis media in 2 cases. Tuberculous mass in corpora quadrigemina in 1. No P.M. in 5.
...	...	...	...	...	...	1	...	Secondary to sarcomata of retro-peritoneal glands.

TABLE III—

DISEASE.	Number of cases.			Age.								Duration of residence.							
	Total.	M.	F.	Under 5	5–10	–20	–30	–40	–50	–60	Above 60	Under 1 week.	Wks. 1–2	Wks. 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Above 1 year.
II. DISEASES OF THE SKIN.																				
Erythema	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Erythema multiforme	1	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...
Eczema	5	1	4	3	...	...	...	...	...	1	1	...	1	...	3	...	1	...	...	...
Dermatitis herpetiformis	2	2	...	...	1	...	...	...	...	1	...	...	1	...	...	...	1	...	...	...
Pustular eruption	1	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Lupus	2	1	1	...	1	...	1	...	...	...	...	...	...	...	1	...	1	...	...	...
Molluscum fibrosum	1	1	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...
Multiple warts of face	1	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...
III. DISEASES OF THE RESPIRATORY SYSTEM.																				
Œdema of glottis	2	2	...	...	...	2	...	...	...	...	...	...	1	...	1	...	...	...	...	...
Laryngitis	13	7	6	5	4	2	1	...	1	...	...	5	2	3	3	...	...	...	...	...
Syphilitic laryngitis	1	...	1	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Perichondritis of larynx	1	1	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Foreign body in larynx	1	1	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Ulceration of trachea	1	...	1	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Angina Ludovici	1	1	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...
Acute bronchitis	12	10	2	11	...	...	1	...	...	...	...	9	2	1	...	...	...	...	...	...
Chronic bronchitis	25	13	12	...	1	...	4	3	7	5	5	8	7	7	3	...	...	...	...	...
Broncho-pneumonia	47	29	18	36	10	1	...	...	...	...	...	12	20	12	3	...	...	...	...	...

continued.

Cured.		Relieved.		Unrelieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
...	1	...	...	...	...	...	...	Result of a burn.
1	...	...	...	...	...	...	...	
...	2	...	2	...	...	1	...	General in 2, both relieved; legs, arms, abdomen, and buttocks in 1, and in 1 face and scalp complicated by bronchitis. Fatal case in a wasting infant; no P.M.
1	...	...	...	...	...	1	...	Albuminuria complicated non-fatal case. Death resulted in fatal case from carcinoma of neck involving larynx.
1	...	...	...	...	...	...	...	
...	...	1	1	...	...	...	...	Of face and leg in 1; face only in 1; the latter had been scraped many times and was scarified.
...	...	...	...	1	...	...	...	In hospital last year also.
1	...	...	...	...	...	...	...	
2	...	...	...	...	...	...	...	Tracheotomy in 1.
7	6	...	...	...	...	...	...	Intubation in 2, aged 5 and 2 years respectively. None diphtheritic. Albuminuria in 2. Ulceration and history of syphilis in one man, but the attack followed work in a drain.
...	...	...	1	...	...	...	...	Acute œdema supervening on gummatous infiltration and ulceration.
...	...	1	...	...	...	...	...	Right half of larynx involved, cause indeterminate.
1	...	...	...	...	...	...	...	Tracheotomy and removal of "whistle" used in ventriloquism. See Special Abstract.
...	...	...	1	...	...	...	...	Nature doubtful.
1	...	...	...	...	...	...	...	
10	2	...	...	...	...	...	...	Erythema nodosum in 1, aphthæ in 1.
...	...	11	10	...	...	2	2	All with acute attack. Marked emphysema in 11, albuminuria in 3, rheumatic pains in 1, whooping-cough in 1, possible phthisis in 1, ulceration of legs in 1, prolapsed inflamed ovary in 1, and urethral stricture with cystitis in 1. Of fatal cases, emphysema, dilated heart, and congested viscera in 3, 1 showing also infarction of lung, and 1 obsolete tubercle. No P.M. in 1.
19	16	5	1	...	...	5	1	Of non-fatal cases, otitis media in 2, pleural effusion in 2, mitral incompetence in 1, emphysema in 1, suspicion of tubercle in 2. Of fatal cases, miliary tuberculosis in 1, pleurisy with effusion in 1, lung breaking down in 1, recent mitral endocarditis in 1, and in 1 no P.M.

TABLE III—

DISEASE.	Number of cases.			Age.								Duration of residence.							
	Total.	M.	F.	Under 5	5–10	–20	–30	–40	–50	–60	Above 60	Under 1 week.	Wks. 1–2	Wks. 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts 9–12	Above 1 year.
III. DISEASES OF RESPIRATORY SYSTEM—*continued.*																			
Acute pneumonia . .	80	61	19	2	15	17	15	13	9	8	1	13	30	34	3	...	...	...	...	...
Phthisis	71	47	24	1	2	10	20	20	8	8	2	11	20	25	15	...	...	...	...	...
Emphysema . . .	1	1	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...
Collapse of lung . .	3	3	...	3	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...
Asthma	1	...	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...
Hæmoptysis . . .	3	1	2	...	...	...	2	1	...	...	...	1	2	...	...	...	...	...	...	...
Pleurisy	59	43	16	2	5	13	15	15	7	2	...	6	12	27	14	...	...	...	...	...
Empyema	18	12	6	4	7	1	1	3	1	...	1	1	...	2	7	8	...	...	...	...
Pyopneumothorax . .	3	3	...	...	...	2	...	...	1	...	...	1	...	1	...	1	...	...	...	...

continued.

Cured.		Relieved.		Unrelieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
47	17	3	...	...	...	11	2	Situation of disease: right lung 40, left lung 35, both lungs 3, indeterminate 2. Of cases on the right side, in 7 the upper, in 2 the middle and upper, in 5 the middle and lower, in 21 the lower lobes affected, and in 5 the whole lung. Of cases on the left side, in 3 the upper, in 28 the lower, and in 4 both lobes affected. Both bases solid in 2 cases, and the right middle lobe in addition in 1. Of 8 cases with definite history of alcoholic excess 2 proved fatal. Of non-fatal cases, excessive effusion into pleuræ in 5, albuminuria in 18, delirium in 7, mitral incompetence in 2, mitral obstruction and incompetence in 1, dilatation of heart in 1, rigors accompanying crisis in 1, diarrhœa in 1; in 1 case the pneumonia complicated melancholia, in 1 idiopathic muscular atrophy, and in 1 sensory loss in the legs. Of fatal cases, old phthisis in 2. Pericarditis in 3, associated with endocarditis and infarction of lungs and kidneys in 1, with pleurisy and œdema of membranes of brain in 1, and with gummata of liver in 1. Cirrhosis of liver in 1, tubal nephritis in 2, hyperpyrexia in 1, delirium in 2.
...	...	6	21	30	...	11	3	Of the non-fatal cases, in 6 infection of larynx, in 2 old-standing bronchitis and emphysema, in 4 pleurisy, in 1 empyema, in 14 recent hæmoptysis, in 1 mitral incompetence, in 4 dyspepsia (3 being early cases), in 2 diarrhœa, in 1 lardaceous disease, in 1 albuminuria, in 1 caries of spine, and in 1 tuberculous cervical glands. Of fatal cases, no P.M. on 2; of the rest both lungs were affected in all, in 6 the right chiefly, in 2 the left, and in 3 both equally; laryngeal ulceration in 3, pleurisy in 1. In 4 cases the intestine was ulcerated, and in 1 of these perforated; chronic ulcers of stomach were found in 1, tuberculosis of peritoneum in 1, lardaceous disease in 1, pericarditis in 1, calcareous nodules in spleen in 1.
...	...	...	...	...	...	1	...	Extreme emphysema with dilated and hypertrophied heart.
...	...	...	...	...	...	3	...	2 in wasting infants.
...	...	...	1	...	...	...	...	Associated with nasal polyp.
1	2	...	...	...	...	...	...	1 a case of chronic bronchitis, in others no evident cause.
36	15	7	1	...	...	...	...	Right sided in 28, left sided in 30, bilateral in 1. Aspiration once 20 times, twice 3 times. Phthisis complicated 3, acute nephritis 1, albuminuria 3, pericarditis 1, endocarditis 3, dementia 1. Hæmorrhagic effusion in 1.
7	6	3	...	...	...	2	...	Right sided in 11, left sided in 7. Resection of rib in all. 3 were sequels of pneumonia, and 2 of broncho-pneumonia. Of fatal cases, broncho-pneumonia and collapse of lung in 1; bronchitis, cystitis, and granular kidneys in 1.
1	...	1	...	...	...	1	...	Rib resected in each non-fatal case. 1 followed spontaneous discharge externally of an empyema. In fatal case a small superficial abscess seated in right lower lobe of lung.

TABLE III—

DISEASE.	Number of cases.			Age.							Duration of residence.							
	Total.	M.	F.	Under 5	5–10	–20	–30	–40	–50	–60	Above 60	Under 1 week.	Wks. 1–2	Wks. 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Above 1 year.
III. DISEASES OF RESPIRATORY SYSTEM—*continued.*																				
Abscess of lung	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Intra-thoracic growth	7	7	...	...	1	...	2	...	2	2	...	1	1	3	...	1	1	...	...	...
Abscess in mediastinum	1	1	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...
IV. DISEASES OF ORGANS OF CIRCULATION.																				
Pericarditis	3	2	1	...	...	2	...	...	1	...	...	...	...	2	1	...	...	...	...	...
Valvular disease of heart—																				
(*a*) Mitral obstruction	12	4	8	...	...	1	2	6	3	...	...	2	4	3	3	...	...	...	...	...
(*b*) Mitral incompetence	29	11	18	...	1	6	4	8	4	4	2	2	5	9	10	3	...	...	...	...
(*c*) Mitral obstruction and incompetence	22	9	13	2	10	2	3	4	1	...	...	1	2	8	8	3	...	...	...	...
(*d*) Aortic disease	4	4	...	...	...	...	1	2	1	...	...	3	...	1	...	...	...	...	...	...
(*e*) Mitral and aortic disease	28	18	10	4	5	7	4	6	2	...	...	5	2	6	7	8	...	...	...	...

continued.

ured.		Re-lieved.		Unre-lieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
..	1	...	...	...	...	...	...	Right sided near base; 3 collections of pus evacuated at successive operations.
..	...	3	...	2	...	2	...	Of non-fatal cases, in 1 exploration showed malignant growth of lung. Of fatal cases, in 1 sarcoma infiltrating lung and eroding spine, in 1 no P.M.
..	...	...	...	...	...	1	...	Abscess between heart and right lung; adherent pericardium; cause indeterminate.
2	1	...	...	...	...	...	...	For cases associated with endocarditis see below.
..	...	3	7	...	...	1	1	History of rheumatic fever in 4, chorea in 1, scarlet fever in 2. Hæmatemesis in 1, bronchitis in 3, albuminuria in 3, pregnancy in 1. Of fatal cases, acute phthisis in 1 (no P.M.); in other narrowing of both mitral and tricuspid orifices, cardiac viscera, and infarction of lung and kidney.
..	...	9	15	...	...	2	3	Rheumatism in 23, chorea in 1, scarlet fever in 1, no history of rheumatism in 4 others. Of non-fatal cases, bronchitis in 2, hæmoptysis in 1, pleural effusion in 6, pericarditis in 3, tricuspid murmur in 3, venous thrombosis in 1, vomiting in 3, enlarged liver in 8, ascites in 7, albuminuria in 9, hallucinations in 1. Of fatal cases, in 3 no P.M.; in 1 of these pericarditis and hæmothorax; in remaining 2 the usual signs of visceral congestion, and in addition pulmonary thrombosis in 1, hydrothorax in both, and ascites in 1.
..	...	8	13	...	...	1	...	No history of rheumatism in 4; rheumatism in 14, chorea in 1, history not obtained in 3, 2 had rheumatic pains whilst in hospital. Of the non-fatal cases, pericarditis in 2, adherent pericardium in 1, tricuspid murmur in 1, bronchitis in 3, pneumonia in 1, congested lung bases in 7, hæmoptysis in 1, hydrothorax in 1, considerable enlargement of liver in 5, ascites in 2, albuminuria in 5, menorrhagia in 1, and old right hemiplegia in 1. In the fatal case infarction of lungs and usual congestion of viscera.
..	...	4	...	...	...	...	...	History of rheumatism in 1 and of syphilis in 1. In 1 a suspicion of aneurysm. In 1 angina and albuminuria.
..	...	9	7	...	...	9	3	History of rheumatism in 17; 1 attributed to a kick; rheumatism whilst in hospital in 1. Of non-fatal cases, mitral obstruction in 3, pericarditis in 1, albuminuria in 10, enlarged liver in 7, ascites, hydrothorax, epistaxis, hæmatemesis and infarction of kidney each in 1. Of fatal cases, in 2 no P.M.; pericarditis in 3, tricuspid vegetations in 1, mitral stenosis in 2 (1 with adhesion of aortic cusps also), infarcted kidney in 1, hydrothorax in 1, extreme arterio-sclerosis in 1, and pregnancy at 6th month in 1.

TABLE III—

DISEASE.	Number of cases.			Age.							Duration of residence.							
	Total.	M.	F.	Under 5	5–10	–20	–30	–40	–50	–60	Above 60	Under 1 week.	Wks. 1–2	Wks. 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Above 1 year.
IV. DISEASES OF ORGANS OF CIRCULATION—*continued.*																				
Ulcerative endocarditis	10	7	3	...	...	...	5	4	1	...	...	2	4	2	2	...	...	...	...	..
Congenital heart disease	1	...	1	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	..
Thoracic aneurysm	7	7	...	...	...	...	...	2	3	...	2	1	1	2	1	2	...	...	...	..
Abdominal aneurysm	1	1	...	...	...	...	...	...	...	1	...	...	...	...	1	...	..	...	...	..
Thrombosis	3	1	2	...	...	...	1	...	2	...	...	...	2	1	...	...	...	...	...	..
Angina	1	1	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	..	..
Raynaud's disease	2	...	2	...	...	...	1	...	1	...	...	...	2	...	...	...	...	...	...	..
Fatty heart	1	1	..	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	..
V. DISEASES OF THE DUCTLESS GLANDS.																				
Exophthalmic goitre	6	1	5	...	...	...	3	2	1	...	...	...	1	3	1	1	...	...	...	..
VI. DISEASES OF THE DIGESTIVE TRACT.																				
1. *Alimentary canal.*																				
Tonsillitis	25	7	18	1	2	8	12	2	...	...	...	9	13	3	...	...	...	...	...	..
Malignant stricture of œsophagus	11	10	1	...	...	...	...	...	4	3	4	4	2	3	2	...	...	...	...	..
Dysphagia	1	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	..
Dyspepsia	35	11	24	1	...	7	13	3	5	5	1	8	16	10	1	...	...	...	...	..
Gastric ulcer	61	3	58	...	...	6	33	15	4	2	1	7	7	28	18	1	...	...	...	..

continued.

ıred.		Re-lieved.		Unre-lieved.		Died.		REMARKS.
	F.	M.	F.	M.	F.	M.	F.	
...	...	...	...	...	...	7	3	Cerebral hæmorrhage in 1, infarction of lung in 1, of spleen in 2, of kidney in 2; pneumonia in 1, obsolete tubercle of lungs in 1, rupture of aorta into pericardium in 1, adherent pericardium in 1, nephritis in 5, subserous and submucous hæmorrhages in 1.
...	...	...	1	...	...	...	...	Albuminuria.
...	...	5	...	1	...	1	...	All of ascending arch. In fatal case sacculated aneurysm, erosion of sternum, and rupture into right pleural sac.
...	...	...	...	1	...	...	...	Large aneurysm in upper part of abdomen. Patient discharged at own request.
.	2	1	...	...	...	...	...	Innominate vein in 1, veins of arms and legs in 1, and of legs only in 1. See also various cerebral, paraplegia, and mitral disease.
...	...	1	...	...	...	...	...	
...	...	...	1	...	1	...	...	
...	...	1	...	...	...	...	...	
...	...	1	4	...	...	...	1	Of non-fatal cases, mitral regurgitation in 2. In one case the right lobe of thyroid was removed, and another was treated with thymus gland; the results were not striking. In the fatal case there was uniform fibrous enlargement of the thyroid gland; the mediastinal and mesenteric glands were also enlarged; the left kidney was strangulated.
7	18	...	...	...	...	...	...	5 nurses and 1 ward-maid. Suppuration in 3, rheumatism in 1.
...	...	3	1	1	...	6	...	P.M. in 4 cases only. In 2 the growth involved the lower, and in 2 the middle part of œsophagus. Disseminated growth in 1, abscess communicating with right bronchus and broncho-pneumonia in 1, gangrene of lung in 1, aspiration pneumonia in 1.
...	...	1	...	...	...	...	...	Cause not obvious.
7	20	4	4	...	...	...	...	Dilated stomach in 3.
...	...	3	54	...	...	...	4	Of the non-fatal cases, there was a history of hæmatemesis in all save 12, and of these there was melæna in 1, whilst 4 were doubtful cases. Of the fatal cases, perforation in all, exploration in 2; ulcer on posterior wall in 1, anterior wall in 2, and in 1 no P.M. Thickening of mitral valve in 1.

TABLE III—

DISEASE.	Number of cases.			Age.								Duration of residence.							
	Total.	M.	F	Under 5	5–10	–20	–30	–40	–50	–60	Above 60	Under 1 week.	Wks. 1–2	Wks. 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Above 1 year.
VI. DISEASES OF THE DIGESTIVE TRACT—*continued.*																				
1. *Alimentary canal*—cont.																				
Malignant disease of stomach	10	5	5	...	...	...	1	1	3	3	2	1	5	2	2	...	...	...	...	...
Dilated stomach	1	...	1	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...
Vomiting	6	1	5	...	...	1	2	1	1	1	...	1	1	2	2	...	...	...	...	...
Hæmatemesis	4	4	...	...	...	...	1	1	1	...	1	1	1	1	1	...	...	...	...	...
Gastralgia	1	...	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...
Ulcer of duodenum	1	1	...	...	...	...	...	..	1	...	...	1	...	...	...	...	...	...	...	...
Diarrhœa	34	21	13	21	2	5	2	1	3	...	...	15	10	4	5	...	...	...	...	...
Tuberculous ulceration of intestine	1	...	1	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Dysentery	2	2	...	...	...	...	...	...	...	1	1	...	...	...	2	...	...	...	...	...
Colic	8	4	4	...	1	1	...	2	2	2	...	7	1	...	...	...	...	...	...	...
Constipation	8	4	4	...	...	6	...	...	...	2	...	5	...	1	2	...	...	...	...	...
Intussusception	5	3	2	2	1	...	...	2	...	...	...	2	...	2	1	...	...	...	...	...
Internal strangulation	5	5	...	...	1	...	2	1	1	...	...	3	1	1	...	...	...	...	...	...
Obstruction, other forms	6	3	3	...	...	3	...	1	...	2	...	5	1	...	...	...	...	...	...	...

continued.

ured.		Re-lieved		Unre-lieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
...	...	2	2	...	...	3	3	Of fatal cases, pylorus obstructed in 5; anterior wall of stomach perforated in 1; liver involved in 3, and in 2 of these the gall-bladder also, whilst in 1 of them gall-stones and peritoneal growth co-existed; secondary deposit in lungs in 1, pneumonia in 2; thrombosis of veins of neck in 1, and of veins of arm and leg in another.
...	...	...	1	...	...	...	...	
1	4	...	1	...	...	...	...	Pregnancy in 2, moveable kidney in 1.
4	...	...	...	...	...	...	...	One alcoholic.
...	1	...	...	...	...	...	...	
...	...	...	...	...	...	1	...	General peritonitis; exploration; ulcer on anterior wall of first part.
2	10	2	...	...	...	7	3	Fatal cases all in summer or autumn, and in infants. Enlargement of retro-peritoneal glands in 1, and swelling of agminate glands in 2. Of the non-fatal cases, 1 followed the administration of pills with intent to procure abortion, and 2 were possibly cases of ulcerative colitis.
...	...	...	...	...	...	...	1	Admitted with mania and delusions. P.M.—Ulceration of intestine and caseous mesenteric glands, disseminated tubercle in lungs; no gross change in brain.
...	...	2	...	...	...	...	...	
4	4	...	...	...	...	...	...	
2	4	2	...	...	...	...	...	
1	1	...	...	...	...	2	1	Inflation in 1; exploration in 3, including 2 fatal cases. Of fatal cases, in 1 enteric intussusception with papillomatous growth, growth removed, subsequent formation of fæcal abscess and gangrene of bowel; in 1 chronic ileo-cæcal, with fibroid growth in cæcum and perforative peritonitis; in third, reduction, removal of vermiform appendix, and death from shock. The first 2 fatal cases occurred in males aged 32 years; the third in an infant of 6 months.
1	...	...	...	...	...	4	...	All explored. In non-fatal case a band of doubtful origin compressed small intestine. Of fatal cases, in 1 the same band compressed both hepatic flexure of colon and second part of duodenum; in 1 an omental band compressed small intestine and a hydatid cyst of liver, only discovered P.M., complicated; in 1 a band strangulated a Meckel's diverticulum across its base; in 1 the small intestine was strangulated under a band springing from the tip of the vermiform appendix.
...	...	1	...	...	...	2	3	Of fatal cases, exploration in 4, and peritonitis in 2 of these; in 1 a subperitoneal cyst; in 1 small intestine adherent to uterine fibro-myoma; in 2 paralysis of bowel and no definite obstruction. In 1 case, not explored, there was found P.M. a volvulus of small intestine and gangrene of bowel.

TABLE III—

DISEASE.	Number of cases.			Age.								Duration of residence.								
	Total.	M.	F.	Under 5	5–10	–20	–30	–40	–50	–60	Above 60	Under 1 week.	Wks. 1–2	Wks. 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Above 1 year.
VI. DISEASES OF THE DIGESTIVE TRACT—*continued.*																				
1. *Alimentary canal*—cont.																				
Malignant disease of intestine	14	8	6	...	...	2	1	...	4	5	2	3	1	3	5	2	...	...	...	...
Inflammation of vermiform appendix	46	34	12	...	3	22	16	4	...	1	...	10	11	13	11	1	...	...	...	...
Mucous catarrh of rectum	1	1	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Tapeworms	2	...	2	...	...	...	1	1	...	...	...	2	...	...	...	...	...	...	...	...
2. *Peritoneum.*																				
Acute peritonitis	4	1	3	...	1	1	1	...	1	...	...	2	...	1	1	...	...	...	...	...
Tuberculous peritonitis	9	2	7	2	4	1	2	...	...	...	...	1	...	2	4	2	...	...	...	...
3. *Liver.*																				
Acute hepatitis	1	1	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...
Cirrhosis	26	15	11	...	1	2	1	6	10	4	2	5	6	8	6	1	...	...	...	...
Acute yellow atrophy	1	...	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...
Gall-stones	6	...	6	...	...	...	...	3	...	2	1	...	4	...	...	1	1	...	...	...
Obstructive jaundice	7	4	3	1	4	...	...	2	...	...	...	...	3	2	1	...	1	...	...	...
Abscess of liver	1	1	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...
Suppurative cholangitis	1	1	...	...	...	...	...	...	..	1	...	...	...	...	1	...	...	...	...	...

continued.

Cured.		Relieved.		Unrelieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
...	...	6	3	1	1	1	2	Of non-fatal cases, in all save one, which was indeterminate, the large intestine was the seat of disease. Site: rectum in 5, sigmoid flexure in 3, transverse colon in 1, cæcum in 1; the last subsequently proved to be a round-celled sarcoma, and occurred in a youth operated upon 14 months previously for a gangrenous intussusception; he died later on the surgical side. Colotomy in 4. In 1 a malignant deposit in liver felt. Jaundice and ascites in 1. Fatal cases: all of sigmoid flexure; in 1 no P.M.; in 2 general peritonitis, secondary to perforation of ulcer of cæcum in 1; in other cause not ascertained.
24	8	1	2	...	...	9	2	Of non-fatal cases (including 3 doubtful), first attack in 23, second in 6, third in 2, repeated attacks in 5. Exploration in 7, with evacuation of localised abscess in 3, and removal of appendix in 3. Of fatal cases, exploration in all, and appendix in every case either gangrenous or perforated, with accompanying general peritonitis. Perforation due to a pin in one case.
1	...	...	...	...	...	...	...	
..	2	...	...	...	...	...	...	
..	2	...	...	...	...	1	1	Of non-fatal cases, in 1 a vaginal discharge, and in 1 recurrent attacks of gastric pain. Of fatal cases, exploration in 1 only; in both general peritonitis of undetermined origin.
1	1	...	4	1	...	...	2	Of non-fatal cases, incision in 2, pleural effusion in 1, eczema in 1, scarlet fever in 1. P.M. in one case only, fibroid tuberculosis limited to peritoneum.
..	...	...	...	...	...	1	...	Enlarged liver and spleen; hæmorrhage from stomach and bowel. Liver infiltrated with small round cells.
..	...	10	9	...	...	5	2	Of non-fatal cases, ascites in 11 (6 tapped), pleurisy in 4, bronchitis in 2, emphysema and dilated heart in 1, hæmatemesis in 4, jaundice in 1, chronic renal disease in 4, valvular disease of heart in 4, gout in 1, pyrexia in 1. Of fatal cases, jaundice in 2, ascites in 5 (3 tapped), coma and hæmatemesis followed tapping in 1; liver enlarged in 4, and cirrhosis unilobular in 2 of these; tubercle of peritoneum in 1, interstitial nephritis in 1, and in 1 peripheral neuritis.
..	...	...	...	...	...	...	1	See 'Clinical Journal,' Dec. 12th, 1894.
..	4	...	2	...	...	...	...	Colic in 6; jaundice in 2; cholecystotomy in 2.
3	...	1	2	..	1	...	...	3 catarrhal, 1 probably due to cirrhosis; 1 subsequently explored, and was found to be secondary to malignant disease of pancreas.
..	...	..	..	...	...	1	...	Healing ulcer of cæcum; multiple abscesses of liver and abscess in lower lobe of right lung. See Special Abstracts.
..	...	...	...	...	...	1	...	Malignant ulcer of duodenum involving orifice of bile-duct; liver riddled with abscesses. See Special Abstracts.

TABLE III—

DISEASE.	Number of cases.			Age.								Duration of residence.								
	Total.	M.	F.	Under 5	5–10	–20	–30	–40	–50	–60	Above 60	Under 1 week.	Wks. 1–2	Wks. 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Above 1 year.
VI. DISEASES OF THE DIGESTIVE TRACT—*continued.*																				
3. *Liver*—continued.																				
Hydatid disease of liver	3	1	2	...	1	..	...	2	...	...	...	1	1	...	...	1	...	...	...	...
Malignant disease of liver	1	1	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...
4. *Various.*																				
Abdominal tumours	20	7	13	...	...	...	3	5	6	3	3	2	5	8	4	...	...	1	...	...
Ascites	4	1	3	...	...	1	1	...	1	1	...	1	...	...	1	1	1	...	...	...
VII. DISEASES OF THE GENITO-URINARY SYSTEM.																				
Acute nephritis	28	19	9	...	...	4	8	14	...	2	...	3	3	13	7	2	...	...	...	...
Chronic nephritis	45	32	13	...	1	8	4	9	13	6	4	8	9	11	13	3	1	...	...	...
Tuberculous disease of kidney	2	...	2	...	...	1	...	1	...	...	...	1	...	...	1	...	...	...	...	...
Malignant disease of kidney	1	1	...	...	...	...	...	...	1	...	...	...	...	.	1	.	...	...	...	...
Cystic disease of kidney	1	...	1	...	...	...	...	1	...	...	...	1	...	..	..	...	...	...	...	...
Calculous pyelitis	1	1	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...

continued.

Cured.		Relieved.		Unrelieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
..	1	...	...	1	1	...	...	Cyst successfully removed in 1, 1 transferred to surgical side.
...	...	...	...	1	...	...	...	
..	1	2	4	2	8	3	...	Ascites and paracentesis in 4. One case of pancreatic cyst was subsequently successfully treated on the surgical side. Of the fatal cases, in 1 a malignant growth involved stomach, omentum, and intestines; in 1 a malignant growth of the prevertebral glands caused chylous ascites, and was accompanied by cirrhosis of liver and tuberculosis of lungs; in 1 removal of a simple inflammatory tumour of mesentery with part of transverse colon was followed by peritonitis.
1	1	...	2	...	...	...	...	Paracentesis in 1, exploration in 2. Liver enlarged in 2, and in one of these chronic peritonitis of doubtful origin.
4	2	10	6	...	...	5	1	4 complicated pregnancy, and 1 was probably scarlatinal. Of non-fatal cases, pleurisy in 1, bronchitis in 1, œdema of lung in 1, pericarditis in 1, ascites in 1, vomiting in 3, and cystitis in 1. Of fatal cases, pneumonia of right upper lobe and large pale kidneys in 1, double pleurisy and right apical pneumonia with obsolete tubercle in 1; recent aortic and mitral endocarditis in 1, recent mitral endocarditis and purulent peritonitis in 1; gummata of liver and of lung with peritonitis in 1.
23	9	...	...	...	...	9	4	History of gout in 5, and of scarlet fever in 1. Of non-fatal cases, pleurisy in 2, bronchitis in 5, pericarditis in 1, mitral incompetence in 10, blocking of radial arteries in 1, neuro-retinitis in 2, amaurosis in 1, tuberculous glands with ulceration of neck in 1, delusional insanity in 1. Of fatal cases, no P.M. in 2, kidneys small and granular in 4, large and pale in 2, large and granular in 5, contained calculus in 1; infarct of lung 1, of kidney 1, and of spleen 1; uratic deposit in great toe-joint in 1, hydroperitoneum in 2, hydrothorax in 2, cirrhosis of liver in 2; in 1 old suppuration of knee-joint and blocking of posterior tibial artery.
...	...	...	...	...	1	...	1	1 transferred to surgical side; in other extensive tuberculous disease of kidneys and urinary bladder, with old deposit at apices of lungs.
...	...	...	...	...	...	1	...	A sarcoma. Death followed nephrectomy. Remaining kidney granular, with uratic deposits; obsolete pulmonary tubercle.
...	...	...	...	...	..	...	1	Extreme cystic disease of both kidneys, and slight hypertrophy of left ventricle.
...	...	1	...	...	...	...	...	

TABLE III—

DISEASE.	Number of cases.			Age.								Duration of residence.								
	Total.	M.	F.	Under 5	5–10	–20	–30	–40	–50	–60	Above 60	Under 1 week.	Wks. 1–2	Wks. 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Above 1 year.
VII. DISEASES OF GENITO-URINARY SYSTEM—*continued.*																				
Hydronephrosis	2	2	...	...	...	...	1	...	1	...	...	1	...	...	1	...	...	...	...	...
Pyonephrosis	1	...	1	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...
Perinephritic abscess	1	1	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...
Moveable kidney	5	...	5	...	...	...	3	1	...	1	...	...	2	3	...	...	...	...	...	...
Renal colic	4	2	2	...	...	...	1	3	...	...	...	2	2	...	...	...	...	...	...	...
Paroxysmal hæmoglobinuria	1	1	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Hæmaturia	2	2	...	...	...	1	...	...	...	...	1	...	2	...	...	...	...	...	...	...
Malignant disease of urinary bladder	1	...	1	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...
VIII. DISEASES OF THE NERVOUS SYSTEM.																				
Acute meningitis	2	2	...	1	...	1	...	...	...	...	...	1	1	...	...	...	...	...	...	...
Tuberculous meningitis	11	3	8	5	2	2	...	1	1	...	...	7	4	...	...	...	...	...	...	...
Chronic meningitis	2	...	2	1	1	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...
Hemiplegia	10	7	3	...	...	...	2	2	3	1	2	2	3	2	3	...	...	...	...	...
Cerebral hæmorrhage	11	10	1	...	...	...	...	2	3	3	3	5	...	4	2	...	...	...	...	...
Cerebral tumour	13	8	5	...	1	2	3	3	4	...	...	...	3	6	3	1	...	...	...	...
Cerebral syphilis	1	...	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...

continued.

Cured.		Relieved.		Unrelieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
...	...	...	...	1	...	1	...	1 transferred to surgical side. In fatal case double hydronephrosis, dilated ureters, cystitis, and uræmia, urethra being obstructed by enlargement of left lobe of prostate.
...	...	...	...	...	1	...	...	Old pyonephrosis, with discharging sinus.
...	...	...	...	1	...	...	...	Transferred to surgical side.
...	...	...	5	...	...	...	...	
2	2	...	...	...	...	...	...	
1	...	...	...	...	...	...	...	
2	...	...	...	...	...	...	...	Cause obscure.
...	...	...	...	...	...	...	1	Uræmia. P.M.—Extensive infiltration of bladder by growth; right ureter obstructed by a fibrous band and corresponding kidney atrophic; left kidney large and granular; hypertrophied left ventricle.
...	...	...	...	...	...	2	...	In 1 chiefly basal, with patchy softening of grey matter of cord, and associated right apical pneumonia; in other general acute meningitis of indeterminate cause.
...	...	...	...	...	...	3	8	Tubercle of lungs in 4, chronic ear disease in 2, caseous mesenteric glands in 1, yellow tubercle in pleura in 1, general tuberculosis in 2, no P.M. in 1.
...	...	...	...	...	...	...	2	
...	...	5	2	1	1	1	...	Left sided in 4; right sided in 6, with aphasia in 1, and history of aphasia in another; left hemianopia in 2; epileptiform attacks in 3; dementia in 1. History of syphilis in 4. In fatal case extensive softening of right cerebral hemisphere, involving central ganglia, old tubercle at apices of lungs, and extensive miliary tuberculosis of visceral pleuræ.
...	...	4	1	...	...	6	...	Of non-fatal cases, right hemianæsthesia in 2, chronic renal disease in 2, lead line in 1. Of fatal cases, hæmorrhage in right cerebral hemisphere in 2, bilateral in 1, pontine in 1, crural in 1. Granular kidneys in 5 fatal cases. On 1 no P.M.
...	...	1	3	4	...	3	2	Includes 2 doubtful cases, probably tumours of cerebellum. Of non-fatal cases, history of syphilis in 2, Jacksonian epilepsy and delusions in 1. Of fatal cases, sarcoma of left frontal lobe in 1; glioma of left frontal lobe, with smaller tumour near posterior extremity of left corpus striatum in 1; glioma of left frontal lobe, with hæmorrhage into it, and uncrossed hemiplegia in 1; glioma of left motor convolutions in 1; tumour arising from dura in posterior fossa, and multiple tumours of brain and cerebellum in 1.
...	...	1	...	...	...	...	...	See also under "Hemiplegia," "Tumour," and "Thrombosis of basilar artery" for others.

Table III—

DISEASE.	Number of cases.			Age.								Duration of residence.								
	Total.	M.	F.	Under 5	5–10	–20	–30	–40	–50	–60	Above 60	Under 1 week.	Wks. 1–2	Wks. 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Above 1 year.
VIII. Diseases of the Nervous System—*continued.*																				
Thrombosis of basilar artery	2	1	1	...	...	...	1	1	...	...	...	1	1	...	...	.	...	..	.	...
Headache . . .	5	2	3	...	...	2	1	2	...	...	...	1	1	3	...	...	...	...	...	..
Obscure cerebral disease	6	3	3	1	...	...	...	1	1	3	...	2	1	...	2	1	...	...	...	..
Porencephalus . .	1	...	1	...	...	1	...	..	...	...	..	...	...	1	...	...	...	...	..	..
Cerebral abscess .	2	...	2	1	...	1	...	...	...	...	.	2	...	...	...	...	...	..	...	..
Cerebellar abscess .	2	2	...	.	1	1	...	..	...	...	...	...	1	1	...	.	...	...	...	..
General paralysis .	6	6	...	...	...	...	1	2	3	...	...	3	3	...	...	...	...	..	...	..
Melancholia . .	3	2	1	...	...	1	2	..	...	...	...	1	1	1	...	...	...	..	...	..
Idiocy	3	3	...	1	2	...	...	...	...	...	...	2	...	1	...	...	...	..	...	..
Dementia . . .	4	...	4	...	...	...	...	...	1	1	2	1	2	1	...	...	...	...	...	..
Chorea	29	5	24	...	3	21	3	...	2	...	...	1	4	7	13	4	...	...	...	..
Hysteria . . .	38	4	34	.	.	...	13	14	7	3	1	...	8	9	12	5	3	...	...	1	..
Epilepsy	12	9	3	1	...	1	4	4	1	1	...	4	2	4	2	...	...	...	...	..
Infantile convulsions	3	2	1	3	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	..
Vertigo	3	3	...	...	...	...	...	2	..	1	...	1	1	1	...	...	...	...	...	..
Spinal hæmorrhage .	1	1	...	...	..	...	...	...	1	...	...	...	1	...	...	...	...	...	...	..
Myelitis . . .	7	5	2	...	...	...	2	1	4	..	...	1	...	2	1	2	1	...	...	..
Infantile paralysis .	4	...	4	1	2	1	...	...	...	...	...	...	1	2	..	1	...	...	...	..
Progressive muscular atrophy	2	2	...	...	...	...	...	1	...	1	...	...	...	1	1	...	...	...	...	..
Paraplegia . . .	6	2	4	...	1	..	3	...	2	...	...	1	...	...	1	2	...	1	1	..
Disseminated sclerosis	4	4	...	...	...	..	1	1	...	1	1	1	1	1	1	...	...	..	...	..
Lateral sclerosis .	5	3	2	...	...	1	2	2	...	...	...	...	...	2	3	...	...	...	...	..
Locomotor ataxy .	8	6	2	...	...	...	...	3	4	1	...	2	...	3	2	1	...	...	...	..
Friedreich's disease .	1	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	..
Obscure disease of cord	1	...	1	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	..
Multiple neuritis .	1	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	..

continued.

Cured.		Relieved.		Unrelieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
...	1	...	...	...	...	1	...	History of syphilis in both. In fatal case, disease of wall of basilar artery and thrombosis, with softening of pons, part of left internal capsule, and optic thalamus.
...	1	2	1	...	1	...	...	Errors of refraction in 2.
...	...	...	3	3	...	...	...	
...	...	...	...	...	...	...	1	
...	...	...	...	...	...	...	2	In 1 symmetrical abscesses of occipital lobes, basal meningitis, and tubercle of lungs. In 1 left temporo-sphenoidal abscess and meningitis secondary to ear disease.
1	...	...	...	...	...	1	...	Of right lobe in 1, successfully evacuated. In other of left lobe associated with left temporo-sphenoidal abscess and thrombosis of lateral sinus. Both cases secondary to ear disease.
...	...	...	...	6	...	...	...	
1	...	...	1	1	...	...	...	Suicidal tendency in 2. Double lamellar cataract in 1.
...	...	...	..	3	...	...	...	
...	...	...	...	...	4	...	...	In 1 post-paralytic.
3	23	...	1	...	...	2	...	19 were cases of first, 2 of second, 5 of third, and 3 of later attack. Acute rheumatism or history of it in 11, pregnancy in 3, evidence of mitral disease in 17, mania in 2. Of fatal cases, in 1 death from enteric fever, and no P.M.; in other acute tuberculosis of lungs, aortic and mitral endocarditis, and fibroid atrophy of left adrenal: no gross change in brain or cord.
3	25	...	5	1	4	...	...	Convulsions in 4, paraplegia in 6, hemiplegia and hemianæsthesia in 2, paralysis of arm in 1, of leg in 1, head movements in 1, limb tremor in 1, contracture in 2, vomiting in 3, dyspepsia in 1, aphonia in 1, deafness in 1, perversions of sensation in 2, dyspnœa in 1. In 4 Weir-Mitchell treatment adopted.
...	...	7	2	2	1	...	...	Dementia in 1, mania in 1, coma in 1.
1	1	..	...	...	...	1	...	Result of P.M. in fatal case negative.
...	...	...	...	3	..	...	...	
...	...	1	...	...	...	..	...	
...	...	...	...	3	2	2	.	In 1 fatal case a central syphiloma in lower dorsal region with surrounding myelitis. No P.M. in other case.
...	...	..	2	...	1	..	1	No P.M. in fatal case.
...	...	2	...	...	...	..	...	
...	...	2	1	...	3	...	...	Congenital and spastic in 1, secondary to caries of spine in 3, and to carcinoma of breast in 1; in 1 possibly hysterical.
...	...	1	...	3	...	...	...	
...	...	2	1	1	1	...	...	
...	...	3	2	3	...	...	...	
...	...	...	...	1	...	...	...	
...	...	...	...	...	1	...	...	
...	...	...	...	...	...	1	...	Cause not ascertained; died from enteric fever subsequently contracted.

TABLE III—

DISEASE.	Number of cases.			Age.							Duration of residence.								
	Total.	M.	F.	Under 5	5–10	–20	–30	–40	–50	–60	Above 60	Under 1 week.	Wks. 1–2	Wks. 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Above 1 year.
VIII. DISEASES OF THE NERVOUS SYSTEM—*continued.*																				
Musculo-spiral paralysis	1	1	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...
Sciatica	1	1	...	...	...	..	...	...	1	...	...	...	...	...	1	...	...	...	...	...
Neuralgia	3	2	1	...	...	...	1	1	...	...	1	1	2	...	...	...	...	...	...	...
Pseudo-hypertrophic paralysis	1	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...
IX. POISONING.																				
Alcoholism—																				
(1) Paralysis	9	3	6	...	...	...	...	5	4	...	...	...	1	2	2	2	2	...	...	...
(2) Intoxication	3	2	1	...	...	..	1	1	1	...	...	3	...	...	...	...	...	...	...	...
Plumbism	6	6	...	..	...	...	1	3	2	...	...	2	4	...	...	...	...	...	...	...
Opium	5	4	1	...	...	...	2	2	...	1	...	3	1	1	...	...	...	...	...	...
Carbolic acid	5	2	3	...	...	...	1	2	2	...	...	2	2	1	...	...	...	...	...	...
Oxalic acid	2	2	...	...	...	...	1	1	...	...	...	...	1	1	...	...	...	...	...	...
Acetic acid	1	...	1	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...
Hydrochloric acid	3	2	1	1	...	...	...	1	1	...	...	3	...	...	...	...	...	...	...	...
Nitric acid	1	...	1	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...
Sulphuric acid	1	1	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	.	...
Belladonna	1	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Phosphorus	1	...	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Turpentine	1	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Creolin	1	1	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...
Camphor liniment	1	1	...	...	...	...	...	...	1	...	..	1	...	...	...	...	...	...	...	...
Sewer gas	1	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...

continued.

Cured.		Re-lieved.		Unre-lieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
1	...	...	...	...	...	...	...	
1	...	...	..	...	...	...	...	
1	1	1	...	...	...	...	...	
...	...	...	...	...	...	1	...	Phthisis the cause of death. Extreme change in muscles.
...	...	2	6	...	...	1	...	Delusions in 1, enlarged liver in 2, albuminuria in 2. In fatal case granular kidneys and extensive tuberculosis of lungs.
2	1	..	...	...	...	...	...	
6	...	...	...	...	...	...	...	4 painters, 1 plumber and painter, 1 electrician. Colic in all, and chronic renal disease in 2.
2	1	...	...	...	...	2	...	1 morphino-maniac, rest suicidal. One fatal case terminated in Casualty-room. Granular kidneys in both fatal cases, with obsolete tubercle at apices in 1, and obliteration of left pleural sac in other.
1	2	...	1	...	...	1	...	All suicidal. Right basal pneumonia supervened in 1. In fatal case intense inflammation of fauces and air-passages; false membrane in œsophagus; hæmorrhages in mucous membrane of stomach and strong carbolic odour.
2	...	...	...	...	...	...	...	In 1 acute nephritis, urticarial eruption, and œdema of face; in other transient albuminuria.
...	...	...	...	...	...	...	1	Accidental. Stomach strongly contracted and rugæ eroded; erosion also of tongue, epiglottis, trachea, and œsophagus.
1	1	...	...	...	...	1	...	In fatal case extensive erosion of pharynx, œsophagus, and stomach, the latter viscus being distended, thinned, and of deep chocolate colour, but not perforated; similar change in duodenum.
...	...	...	...	...	...	...	1	Suicidal, in a patient suffering from melancholia. The mucous membrane of epiglottis, larynx, and œsophagus was greenish, corroded, and separating; but little change in stomach.
...	...	...	...	...	...	1	...	Extensive blackening of pharynx and œsophagus, with separation of epithelium. Stomach charred but not perforated; contents grumous. Tracheitis and intense congestion of lungs.
1	...	...	...	...	...	...	...	Delusions, dilated pupils, and erythematous eruption.
...	1	...	...	...	...	...	...	Rat poison swallowed with suicidal intent. Jaundice and enlargement of liver noted 7 days later.
1	...	...	...	...	...	...	...	
1	...	...	...	...	...	...	...	Symptoms closely resembled those of carbolic acid poisoning, *i. e.* whitening of mucous membrane of mouth, collapse, contracted pupils, and olive-green urine.
1	...	...	...	...	...	...	...	
1	...	...	...	...	...	...	...	Asphyxia.

Table III—

DISEASE.	Number of cases.			Age.							Duration of residence.							
	Total.	M.	F.	Under 5	5–10	–20	–30	–40	–50	–60	Above 60	Under 1 week	Wks. 1–2	Wks. 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Above 1 year.
X. Surgical and Miscellaneous.																				
Debility	15	3	12	1	...	3	6	3	2	...	...	7	8	...	...	...	...	...	...	...
Immersion	5	2	3	1	...	1	2	..	1	...	...	5	...	...	...	...	...	...	...	...
Disease of ear	3	...	3	3	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	...
Epistaxis	3	...	3	...	...	1	1	...	...	1	...	2	1	..	..	...	...	...	...	...
Malingering	2	2	...	...	...	1	1	...	...	...	...	2	...	...	...	...	...	...	...	...
Various surgical	8	4	4	...	...	2	2	2	1	1	...	2	3	2	1	...	...	...	...	...
Unclassified	26	15	11	4	...	3	3	8	4	1	3	11	6	7	2	...	...	...	...	...
XI. Diseases of the Female Generative Organs.																				
Erosion of cervix	1	...	1	...	...	...	...	...	1	...	...	...	1	...	...	..	...	...	...	...
Fibro-myoma of uterus	1	...	1	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...
Ovarian cyst	6	...	6	...	...	...	2	1	3	...	...	1	1	1	2	1	...	...	...	...
Ovarian dermoid	2	...	2	...	...	1	1	...	...	...	...	...	2	...	...	...	...	...	...	...
Broad ligament cysts	2	...	2	...	...	1	...	...	1	...	...	...	...	...	1	1	...	...	...	...
Tubal pregnancy	1	...	1	...	...	...	...	1	...	...	...	1	...	...	...	..	...	...	...	...
Salpingitis	2	...	2	...	...	...	...	2	...	...	...	...	...	1	1	...	...	...	...	...
Tuberculosis of pelvic viscera	1	...	1	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...
Total	1787	951	836																	

continued.

Cured.		Relieved.		Unrelieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
3	11	...	1	...	...	...	...	Old mastoid disease in 1, and cervical swelling of doubtful nature in 1.
2	3	...	...	...	...	...	...	Males accidental. Females all suicidal; one alcoholic.
...	1	...	...	...	2	...	...	Facial paralysis in 2; mastoid exploration in 2. See also "Cerebral abscess" and "Cerebellar abscess."
...	3	...	...	...	...	...	...	
2	...	...	...	...	...	...	...	
2	1	2	1	...	2	...	...	Includes cases of intra-peritoneal, lumbar, cervical, and axillary abscess, malignant nasal polyp, periostitis of tibia, and umbilical hernia.
7	6	5	4	3	1	...	...	Includes 1 case of sunstroke, 1 of starvation, 3 of œdema of legs, and 1 of venous thrombosis with pleurisy and pericarditis.
..	...	...	...	...	1	...	...	
...	...	...	...	...	...	...	1	Obstruction of bowel; removal of tumour.
...	3	...	2	...	...	...	1	2 cases transferred to surgical side. 3 operated upon whilst in medical wards. The fatal case died without operation with endocarditis and thrombosis of pulmonary arteries and femoral vein. See Special Abstract.
...	...	...	...	...	2	...	...	Both subsequently successfully removed on surgical side.
...	2	...	...	...	..	...	...	Ruptured cyst and ascites in 1, cystitis in other. Both successfully removed.
...	...	...	...	...	...	...	1	Exploration and removal of ruptured left tube and ovary.
...	...	...	1	...	1	...	...	One followed confinement and was complicated by pleurisy; in another a dilated left tube was subsequently removed in Adelaide Ward.
...	...	...	..	...	...	...	1	No P.M.
453	425	198	251	85	45	215	115	
878		449		130		330		
1787								

Table IV.—*Table of Mortality.*

DISEASE.	Total.		Age.									Mortality per cent.
	No. discharged.	No. died.	Under 2	2–5	–10	–20	–30	–40	–50	–60	–70	Above 70	
1. General Diseases.													
Measles	9	2	...	2	...	...	...	...	...	...	...	...	18·18
Scarlet fever	27	5	1	1	1	1	...	...	1	...	...	...	15·62
Enteric fever	42	14	...	...	...	6	5	3	...	...	...	...	25
Erysipelas	18	3	...	...	...	...	1	2	...	...	...	...	14·28
Diphtheria	64	48	12	22	10	3	1	...	...	...	...	...	42·85
Pyæmia	...	2	...	...	...	...	...	1	1	...	...	...	...
Septicæmia	...	1	...	...	...	...	1	...	...	...	...	...	...
Acute rheumatism	111	1	...	...	...	1	...	...	...	...	...	...	·89
Rickets	5	2	1	...	1	...	...	...	...	...	...	...	28·57
Myxœdema	6	1	...	...	...	...	...	...	...	1	...	...	14·28
Diabetes mellitus	5	5	...	...	...	3	...	2	...	...	...	...	50
Purpura	3	2	1	...	...	...	1	...	...	...	...	...	40
Pernicious anæmia	...	2	...	...	...	...	...	1	1	...	...	...	...
Leucocythæmia	1	3	...	...	...	...	1	...	2	...	1	...	75
Lymphadenoma	...	1	...	...	...	...	...	...	1	...	...	...	...
General tuberculosis	...	8	2	5	1	...	...	...	...	...	...	...	...
Disseminated sarcomata	...	1	...	...	...	...	1	...	...	...	...	...	...
2. Diseases of the Skin.													
Eczema	4	1	1	...	...	...	...	...	...	...	...	...	20
Dermatitis herpetiformis	1	1	...	...	...	...	...	...	...	1	...	...	50
3. Diseases of the Respiratory Organs.													
Chronic bronchitis	21	4	...	...	...	...	...	...	1	3	...	...	16
Broncho-pneumonia	41	6	2	2	2	...	...	...	...	...	...	...	12·76
Acute pneumonia	67	13	...	...	1	...	3	3	4	1	1	...	16·25
Phthisis	57	14	...	...	...	3	1	4	1	5	...	...	19·71
Emphysema	...	1	...	...	...	...	...	...	1	...	...	...	...
Collapse of lung	...	3	2	1	...	...	...	...	...	...	...	...	...
Empyema	16	3	...	...	...	...	1	2	...	...	...	...	15·79
Pyopneumothorax	2	1	...	...	...	...	...	...	1	...	...	...	33·33
Mediastinal growth	5	2	...	...	1	...	...	...	...	1	...	...	28·57
Mediastinal abscess	...	1	...	...	...	...	1	...	...	...	...	...	...
4. Diseases of the Circulatory Organs.													
Mitral disease	54	8	...	...	...	2	3	...	1	1	1	...	12·9
Mitral and aortic disease	16	12	...	...	2	2	3	2	3	...	...	...	42·85
Ulcerative endocarditis	...	10	...	...	...	...	5	4	1	...	...	...	...
Thoracic aneurysm	6	1	...	...	...	...	...	1	...	...	...	...	14·28

TABLE IV—*continued.*

DISEASE.	Total.		Age.										Mortality per cent.
	No. discharged.	No. died.	Under 2	2–5	–10	–20	–30	–40	–50	–60	–70	Above 70	
5. DISEASES OF THE DUCTLESS GLANDS.													
Exophthalmic goitre	5	1	...	...	...	...	...	...	1	...	...	...	16·6
6. DISEASES OF THE DIGESTIVE ORGANS.													
Malignant stricture of œsophagus	5	6	...	...	...	...	...	...	4	2	...	...	54·54
Gastric ulcer	57	4	...	...	...	1	2	1	...	...	...	...	6·56
Duodenal ulcer	...	1	...	...	...	...	...	1	...	...	...	...	...
Malignant disease of stomach	4	6	...	...	...	...	...	1	2	2	1	...	60
Diarrhœa	24	10	10	...	...	...	...	...	...	...	...	...	29·41
Intussusception	2	3	1	...	...	...	...	2	...	...	...	...	60
Internal strangulation	1	4	...	...	1	...	1	1	1	...	...	...	80
Obstruction (other forms)	1	5	...	...	...	3	...	1	...	1	...	...	83·3
Malignant disease of intestine	11	3	...	...	...	...	1	...	...	2	...	...	27·27
Inflammation and perforation of vermiform appendix	35	11	...	...	3	4	2	1	...	1	...	...	31·42
Acute peritonitis	2	2	...	...	1	...	...	...	1	...	...	...	50
Tuberculous peritonitis	7	2	1	...	...	1	...	...	...	...	...	...	28·57
Acute hepatitis	...	1	...	...	...	...	...	...	1	...	...	...	...
Cirrhosis of liver	19	7	...	...	...	2	1	1	2	...	1	...	26·92
Suppurative cholangitis	...	1	...	...	...	...	...	...	...	1	...	...	...
Abdominal tumour	17	3	...	...	...	...	...	...	3	...	...	...	15
7. DISEASES OF THE GENITO-URINARY SYSTEM.													
Acute nephritis	22	6	...	...	...	2	...	4	...	...	...	...	21·42
Chronic nephritis	32	13	...	...	...	2	2	3	4	1	1	...	28·88
Tuberculosis of kidney	1	1	...	...	...	1	...	...	...	...	...	...	50
Hydronephrosis	1	1	...	...	...	...	1	...	...	...	...	...	50
Pyonephrosis	...	1	...	...	...	...	...	...	1	...	...	...	...
Sarcoma of kidney	...	1	...	...	...	...	...	...	1	...	...	...	...
Cystic kidney	...	1	...	...	...	...	...	1	...	...	...	...	...
Malignant disease of urinary bladder	...	1	...	...	...	...	...	...	...	...	...	1	...
8. DISEASES OF THE NERVOUS SYSTEM.													
Acute meningitis	...	2	...	1	...	1	...	...	...	...	...	...	...
Tuberculous meningitis	...	11	3	2	2	2	...	1	1	...	...	...	...
Chronic meningitis	...	3	...	...	2	...	...	1	...	...	...	...	...
Meningeal hæmorrhage	1	1	...	...	...	...	...	1	...	...	...	...	50
Cerebral hæmorrhage	5	6	...	...	...	...	...	...	...	3	1	1	54·54
Cerebral softening	...	1	...	...	...	...	...	...	...	...	1	...	...
Cerebral tumour	8	5	...	...	...	...	2	2	1	...	...	...	38·46
Thrombosis of basilar artery	1	1	...	...	...	...	1	...	...	...	...	...	50

Table IV—*continued.*

DISEASE.	Total.		Age.										Mortality per cent.
	No. discharged.	No. died.	Under 2	2–5	–10	–20	–30	–40	–50	–60	–70	Above 70	
8. Diseases of the Nervous System—*continued.*													
Cerebral abscess	...	2	...	1	...	1	...	...	...	...	...	...	...
Cerebellar abscess	1	1	...	...	1	...	...	...	...	...	...	...	50
Chorea	27	2	...	...	...	2	...	...	...	...	...	...	6·89
Infantile convulsions	2	1	1	...	...	...	...	...	...	...	...	...	33·33
Acute myelitis	5	2	...	...	...	...	...	1	1	...	...	...	28·57
Infantile paralysis	3	1	...	...	1	...	...	...	...	...	...	...	25
Pseudo-hypertrophic paralysis	...	1	...	...	...	1	...	...	...	...	...	...	...
9. Poisoning.													
Alcoholic paralysis	8	1	...	...	...	...	...	...	1	...	...	...	11·11
Opium	3	2	...	...	...	...	...	1	...	1	...	...	40
Carbolic acid	4	1	...	...	...	...	1	...	...	...	...	...	20
Acetic acid	...	1	..	...	...	...	...	...	...	...	...	1	...
Hydrochloric acid	2	1	...	...	...	...	...	...	1	...	...	...	33·33
Nitric acid	...	1	...	...	...	...	...	1	...	...	...	...	...
Sulphuric acid	...	1	...	...	...	...	...	...	...	1	...	...	...
10. Diseases of the Female Generative Organs.													
Ovarian cyst	5	1	...	...	...	...	...	...	1	...	...	...	16·66
Tuberculosis of pelvic viscera	...	1	...	...	...	...	...	1	...	...	...	...	...
Tubal pregnancy	...	1	...	...	...	...	...	1	...	...	...	...	...
Fibro-myoma of uterus	...	1	...	...	...	...	...	...	1	...	...	...	...

TABLE V.—*Cases of Infectious Disease originating in the Hospital.*

Sex.	Age.	Disease for which admitted.	Disease originating in hospital.	Date of attack.	Duration of previous residence in hospital.	Result.	Remarks.
F.	5	Diphtheria	Measles	March 31	20 days	C. April 12	From Luke Ward.
M.	2 5/12	Burn	,,	April 14	7 ,,	C. May 21	From Victoria Ward.
M.	6	Talipes equino-varus	,,	,, 17	91 ,,	C. ,, 12	Ditto.
M.	6	Double mucocele	,,	May 6	12 ,,	C. ,, 22	From Ophthalmic Ward.
F.	16	Hysteria	Scarlet fever	Oct. 14, 1893	204 ,,	C. Jan. 18	From Christian Ward.
F.	21	—	,,	Feb. 28	—	C. April 25	Ward-maid in Luke Ward.
M.	5	Diphtheria	,,	March 1	11 days	C. ,, 15	From Luke Ward.
M.	4	Bronchitis	,,	,, 18	5 ,,	D. May 5	Ditto.
M.	3½	Diphtheria	,,	,, 19	15 ,,	C. ,, 23	Ditto.
F.	7	,,	,,	,, 29	3 ,,	D. April 19	Ditto.
M.	16	Enteric fever	,,	April 4	5 ,,	D. ,, 18	From Arthur Ward.
F.	9	Pericarditis and endocarditis	,,	,, 4	27 ,,	C. May 16	Contracted in Job Ward.
F.	1 5/12	Tuberculous peritonitis	,,	,, 15	15 ,,	D. ,, 21	From Charity Ward.
F.	28	—	,,	,, 19	—	C. ,, 20	Nurse.
F.	25	Gastric ulcer	,,	,, 22	2 days	C. June 5	From Charity Ward.
F.	30	—	,,	,, 25	—	C. May 30	Nurse from Alexandra Ward.
M.	5 5/12	Acute epiphysitis of femur	,,	,, 29	92 days	C. June 27	From Victoria Ward.
F.	4/12	Scalp wound	,,	June 22	5 ,,	C. May 5	Ditto.
F.	2 1/12	Fractured femur	,,	,, 27	11 ,,	C. Aug. 5	Ditto.
F.	43	Carcinoma of breast	,,	July 3	8 ,,	D. July 28	From Alexandra Ward.
F.	4	Burn	,,	Sept. 20	22 ,,	C. Nov. 1	Ditto. Fever contracted in Job Ward.
M.	1¾	Tuberculous ankle	,,	Nov. 4	7 ,,	C. Dec. 21	From Victoria Ward.

TABLE V—*continued.*

Sex.	Age.	Disease for which admitted.	Disease originating in hospital.	Date of attack.	Duration of previous residence in hospital.	Result.	Remarks.
M.	20	Varicose veins	Scarlet fever	Nov. 6	7 days	Transferred to Fever Hospital Nov. 7	From Leopold Ward.
F.	23	Anæmia	Influenza	Dec. 27, 1893	6 „	C. Jan. 21	From Christian Ward.
F.	25	—	„	Jan. 20	—	C. „ 27	Nurse.
F.	25	—	„	„ 20	—	C. „ 27	Nurse.
F.	25	—	„	Feb. 5	—	C. Feb. 14	Nurse.
F.	24	—	„	April 10	—	C. April 14	Ward-maid.
F.	8	Chorea	Enteric fever	June 10	24 days	C. Aug. 2	From Christian Ward. A nurse in ward at time with "ambulatory typhoid."
M.	18	Peripheral neuritis	„	Sept. 22	26 „	D. Oct. 28	From Arthur Ward. Origin not traced.
F.	12	Chorea	„	Dec. 1	30 „	D. Dec. 16	From Charity Ward. Undiagnosed case of enteric fever in ward at the time.
M.	24	—	„	„ 13	—	D. „ 26	Student.

SPECIAL ANALYSES AND ABSTRACTS.

I. GENERAL DISEASES.

1. ANALYSIS OF CASES OF ENTERIC FEVER DURING THE YEAR.

The type of disease prevalent during 1894 was particularly severe, contrasting strongly with that of the previous year, when 48 cases were under treatment with but 1 death, giving a percentage mortality of 2·08 only.

During the past year the number of cases treated to a termination was 56, and the deaths were 14, or a mortality of 25 per cent.

The admissions were distributed as follows:—January, 4; February, 7; March, 4 (2 deaths); April, 4; May, 1; June, 2; July, 6 (2 deaths); August, 7; September, 3 (1 death); October, 10 (5 deaths); November, 7 (3 deaths); December, 5 (1 death). Of these cases, 8 remained in hospital in 1895 and subsequently terminated in recovery, whilst included in the 56 cases mentioned above as treated to a termination were 4 admitted during 1893.

The average residence of each case was 43·1 days; of the cases which recovered, 52·78 days; and of those which terminated fatally, 14·07 days.

The details as to age incidence are given in Table III. Of the deaths, 8 resulted from perforation, which occurred, so far as could be ascertained, on the following days of the disease:—14th, 17th, 18th, 24th (twice), 28th, 30th, and 37th. Hyperpyrexia (106·4° F.) was associated with one of these cases, and previous hæmorrhage from the bowel with another. Exploration and resection of bowel was in one case performed on the 14th day of the disease, with fatal termination in 4 hours. In one case death was directly due to hæmorrhage from the bowel, and in another to hyperpyrexia on the 9th day; exhaustion and cardiac failure accounted for the remaining 4. In only 1 of the above cases was there any reason to think that the fatal issue occurred during a relapse. In 1 the enteric fever was complicated by scarlet fever, in 1 by chorea, and in 1 by peripheral neuritis.

Seventeen cases came under observation in the 1st week of the disease, 25 in the 2nd, 13 in the 3rd, and 1 later.

The onset was rapid in 11 cases, and in 2 of these accompanied by vomiting.

A profuse eruption was present in 29, a scanty eruption in 12 cases. In 11 it was not observed, and in 4 there was no note, it being here presumably absent.

Splenic enlargement was present in 47 cases and absent in 8, whilst in 1 there was no record. In 4 of the 8 cases in which it was absent the patients were admitted late in the disease, *i. e.* at the end of the 3rd week or later.

Diarrhœa was present in 23 cases, constipation in 24, and vomiting occurred during the course of the disease in 13.

Initial bronchitis occurred in 2 cases, whilst after the second week it was more or less severe in 24. Right basal pneumonia complicated 1 case, and broncho-pneumonia occurred in 2.

Albuminuria was present in 15 instances, retention of urine in 6, incontinence in 2, and cystitis in 1. In 6 cases profuse hæmorrhage from the bowel occurred, the earliest instance being on the 13th day and the latest in the 3rd week of the disease. In 3 cases the hæmorrhage was recurrent, being in 1 fairly profuse on the 48th day. Slighter hæmorrhage was noticed in 4 cases, and epistaxis occurred once.

Venous thrombosis occurred twice, periostitis twice—once of tibia and once of tarsus. Suppurative otitis media occurred in 2 patients, and abdominal distension was marked in 9.

Delirium occurred in 16 cases, and in 1—a boy—vivid hallucinations were present in the earlier stages.

The temperature exceeded 104° F. in 31 cases, in 1 reaching 108° and in 1 106·4°. The duration of fever whilst under observation was from 3 to 44 days, the average duration being 16·73 days.

Relapse occurred in 5 cases—on the 24th, 25th, 26th, 29th, and 31st days respectively. The duration of the relapse varied from 7 to 19 days, the average being 11·8 days. The maximum temperature during relapse varied from 101·6° to 103·8°, the average maximum being 102·5°. In 4 cases during relapse a fresh crop of spots was observed, and in 3 a fresh enlargement of the spleen.

In all the fatal cases the typical ulceration of the bowels was present, and in 1 pharyngeal and laryngeal ulceration in addition.

2. PYÆMIA; SUPPURATION IN LEFT ACROMIO-CLAVICULAR JOINT.

J. R—, navvy, æt. 39, admitted June 25th, died June 28th, 1894.

He came from a healthy family, was not alcoholic, and had always enjoyed good health up to the present attack. Recently he had been working in sewers, and complained much of the bad smells.

His illness commenced seven days before admission with malaise, muscular pains, cough, shivering, and sweating. Within twenty-four hours he became delirious and refused food. The bowels were constipated.

The patient when examined was found to be muscular and well nourished. Respiration was rapid (28 per minute), and the breath-sounds harsh and accompanied by rhonchi. No enlargement of spleen was then detected. The tongue was dry and fissured, temperature 104° F., and pulse 132 per minute, full and soft. A trace of albumen was found in the urine, and there was slight wandering delirium. No abnormality of optic discs.

During the next three days he remained delirious, the pulse became small and weak, the albumen in the urine increased, and enlargement of the spleen was

detected. All the time the temperature was characteristically irregular, and very little controlled by cold sponging.

Death occurred at 8.30 a.m. on June 28th with hyperpyrexia, the temperature running up to 107·6°.

Post-mortem (29 hours after death).—Decomposition was far advanced. About a drachm of thick pus was found in and around the left acromio-clavicular joint without disease of bone. The lungs were black, full of fluid, but not consolidated. Spleen enormously swollen and semi-fluid. Kidneys swollen and hyperæmic, with a small suppurating infarct about the size of a pea in one. The lower half of the small intestine was lined with a continuous, thick, adherent sheet of yellow mucus. No other lesions were found, and the focus of infection was undetermined.

3. PYÆMIA; SORE ON HEEL; CELLULITIS OF LEG.

B. P—, farrier, æt. 42, admitted August 13th, died August 25th, 1894.

Apparently a temperate man; had lost a brother from phthisis, and had himself suffered from influenza two years ago.

He first noticed a black spot upon his heel seven days before admission, and the same day complained of pain in the right side of the chest. The foot becoming exceedingly painful was poulticed.

When examined on admission the respiratory movements were found to be rapid and shallow, and friction was audible in the right axilla, extending to the back of the chest below the scapula; there was no evidence of effusion. On the outer part of the right heel was a black spot surrounded by a translucent swelling, the whole area being about equal to that of a five-shilling piece; a red blush extended some distance up the outer side of the calf, and the lymphatic glands of the limb were enlarged and tender. The respirations were 36, pulse 96, and temperature 101·6°. The next day free incisions were made, and the sore examined for anthrax bacilli with negative result. Lymphangitis gradually extended up the limb, delirium supervened, and the temperature remained above 103° with slight variations; the pulse ran up to 120. On August 20th signs of effusion into the left pleura were discovered, whilst the right-sided pleurisy had cleared up. On the 21st a rigor occurred, some petechial spots were observed on the chest, and pus was evacuated from the leg by fresh incisions. He died next day, the temperature having remained high and albumen being present in small quantity in the urine.

Post-mortem.—The cellular tissue of the right leg was extensively infiltrated with pus, but there was no thrombosis of the large veins. There was extensive recent pleurisy on the left side, the pleura being thickly coated with inflammatory products; the subjacent left lower lobe of lung was partially consolidated and in parts suppurating, and its bronchi were full of pus. The right lung showed a few purulent deposits. Intense inflammation of the kidneys was present, and in the cortex of the left was a fair-sized abscess. The liver and spleen were soft, the brain congested and œdematous, and the pia mater thickened and opaque.

4. PURPURA; RICKETS.

J. R. C—, æt. $1\frac{7}{12}$, admitted July 28th, died July 29th, 1894.

A plump but very anæmic child; said to have been ailing for three weeks, and for six days to have vomited continually after food; no diarrhœa. The skin eruption was first noticed four days before admission.

When examined, a petechial eruption was present on the trunk, neck, back, and extremities, whilst in each upper eyelid was a large ecchymosis. The thoracic viscera appeared normal. The liver extended $2\frac{1}{2}$ inches below the costal margin. The soft palate and tonsils were swollen, the gums covered by rusty sordes, and the submaxillary glands enlarged and tender. Temp. 101°, respiration quiet, and pulse normal.

For the next nine hours the child took milk well without vomiting, but appeared very drowsy and weak. Death occurred somewhat suddenly soon after 6 a.m. on the 29th.

Post-mortem.—A sparsely scattered purpuric eruption over trunk and lower extremities, subcutaneous hæmorrhages in both upper eyelids, and a smaller one on the forehead. The radial epiphyses and junctions of the ribs with the costal cartilages were enlarged. The pleuræ and pericardium contained a small quantity of blood-stained fluid. No large visceral hæmorrhages were found, but small extravasations were present under the capsules of the liver and kidneys, beneath the pericardium and endocardium, at the root of the tongue, beneath the dura mater, at the base of the brain, and beneath the periosteum of the tibiæ.

5. LEUCOCYTHÆMIA.

Case 1.—G. C—, schoolmaster, æt. 42, readmitted May 2nd, died May 7th, 1894.

Previous health good. Had been to the United States, where he had sunstroke, but never to Africa or India. Abdominal swelling was first noticed about the middle of 1891, and he began to be troubled with pain, sickness, and diarrhœa early the next year; at the same time he became emaciated. Was first admitted to St. Thomas's in February, 1892, and it was then found that the spleen was enormously enlarged, extending to the middle of Poupart's ligament, and that an abnormal number of white corpuscles were present in the blood. A few retinal hæmorrhages were also seen, and the gums were spongy and apt to bleed. There was no fever at the time, the diarrhœa and sickness ceased, and under treatment with arsenic the spleen also diminished somewhat in size. He was discharged after five weeks' residence and kept under observation as an outpatient. Whilst thus attending he had a sudden and transient attack of vertigo, followed immediately by absolute left-sided deafness, and five weeks before readmission he became suddenly deaf on the right side in a similar manner.

In May, 1894, he was readmitted, complaining chiefly of cough and weakness. He was then found to be considerably emaciated and very anæmic; the breath-sounds were harsh and a few crepitations were scattered over the lungs, but there was no evidence of consolidation. The abdomen was very prominent,

especially on the left side, where the costal margin was everted. The superficial veins were greatly dilated, no free fluid was detected, and the enlargement was almost entirely due to the spleen, which extended right into the left iliac fossa, filling up the loin. The liver was also somewhat larger than normal. The retinal veins were much dilated, and there were a few punctiform retinal hæmorrhages with a white patch of exudation in the right eye. He was absolutely deaf to watch and fork, both by air and bone conduction. The temperature was normal, pulse small and feeble; no diarrhœa. Examination of the blood showed great increase in the colourless corpuscles, many eosinophile and neutrophile cells being recognised. The legs were slightly œdematous, but no examination of urine was recorded. He gradually sank, and died five days later.

Post-mortem.—The blood had a decidedly laky appearance. The serous cavities were normal with the exception of a few pleural adhesions. The spleen was enormous; it weighed 150 ounces, was firm, solid, and of a chocolate colour on section, and contained one small infarct. The liver also was much enlarged, but to the naked eye its section showed no marked change. The kidneys were not enlarged, the cortex was mottled, and a number of small white nodules studded both the surface and the section. No other gross change was discovered.

Case 2 (*with much glandular enlargement*).—J. S—, whitesmith, æt. 66, admitted April 18th; died April 30th, 1894.

A temperate man, without family taint, who had always enjoyed good health to within three months of his admission. About this time was troubled by an increase in frequency of micturition, and during the last six weeks had noticed swelling of his legs and abdomen, with enlargement of lymphatic glands.

When examined he was well nourished and in no pain. All the superficial lymphatic glands were moderately enlarged, moveable, fairly hard, and slightly tender. The heart appeared normal. Over the lower lobe of each lung posteriorly the resonance was impaired and vocal fremitus diminished. Numerous crepitations were audible, and the breath-sounds were harsh. The abdomen was uniformly distended, and contained free fluid; the edge of the liver extended 2 inches below the costal margin, but the spleen could not be distinctly felt. There was much œdema of the feet and legs. A large retinal hæmorrhage was present in the right eye. The blood contained a great excess of colourless corpuscles with many eosinophile cells; in addition a few red corpuscles larger than normal, and containing sometimes one, sometimes two nuclei, were present. Pulse 124, temperature 98°; arteries not thickened.

He was troubled by diarrhœa after admission, the stools containing both blood and mucus. On April 25th his temperature began to rise, and cough became more troublesome. No definite change was detected in the lung signs, but by April 30th he was expectorating rusty mucus, and the temperature reached 103·6° F.; the cough was now incessant, and œdema had extended to the hands. Whilst under observation the urine was always deficient in quantity, of average specific gravity, and contained a trace of albumen. Death occurred at 11.30 p.m. on the 30th.

Post-mortem.—Body of a strongly built man, very pale. The abdomen contained 2 pints and the pericardium 2 ounces of clear fluid; the left pleural cavity was entirely obliterated by adhesions, and the base of the corresponding lung was in a condition of reddish-grey pneumonic consolidation; the right lung

showed no disease. The liver was large, weighed 80 ounces, and showed dilatation of the intra-lobular veins, with fatty changes but no leucocythæmic deposit. The spleen was large, soft, weighed 31 ounces, but showed no naked-eye change in structure. The kidneys had undergone moderate interstitial change. The cervical, axillary, mediastinal, and inguinal, but not mesenteric glands were enlarged and discrete. On section they were grey and soft.

Subsequent microscopic examination of the liver revealed the presence of numerous small lymphoid nodules, invisible to the naked eye.

6. PERNICIOUS ANÆMIA.

1. T. C—, fishmonger, æt. 46, admitted March 14th, died April 14th, 1894.

There was no hereditary disease in his family. For the past ten years he had been subject to attacks of gout, and in 1890 suffered from influenza, since which he had business troubles. Since the influenza he had suffered from gradually increasing pallor, weakness, and dyspnœa, and was finally compelled to take to his bed a month before admission; during this latter period there has been repeated epistaxis, with occasional slight bleeding from the gums and bowel.

He was found on admission to be well nourished, with abundant deposit of subcutaneous fat; the skin was of a yellowish tint, and there was extreme anæmia. With the exception of occasional rhonchus the lungs showed no sign of disease, and although the cardiac sounds were very feeble there was no distinct evidence of dilatation. Nothing abnormal was detected in the abdomen, and the urine contained no albumen. The blood was pale and watery, the red discs varied in size, and many were distorted; their number was largely reduced. A few retinal hæmorrhages were present.

On March 19th the patient suffered much from vomiting, and the next day was restless, delirious, and very thirsty; a large left subconjunctival hæmorrhage was then noticed. For the next few days the vomiting continued occasionally, but the hæmorrhage diminished. Despite the administration of arsenic in increasing doses the red discs were on the 29th found to be only 700,000 per c.mm. He still continued sick and semi-delirious, the heart-sounds became more feeble and the pulse more rapid. On April 6th the urine was noted as being dark-coloured, the red discs further reduced to 300,000 per c.mm.; diarrhœa set in about this time, the fæces being dark in colour but not containing blood. This condition continued until April 14th, the day of death, when the patient was so collapsed that 1½ pints of normal saline solution were infused into the median basilic vein—with, however, no good result. The temperature was febrile throughout, at times rising to 102° F., and towards the end a trace of albumen appeared in the urine.

Post-mortem.—Body and viscera very pale; much lemon-yellow fat. The lungs were very emphysematous, and obsolete tubercle was found at both apices. The heart was large, flabby, and covered with fat; it weighed 16¼ ounces. There was early atheroma of the aorta, and a considerable amount of interstitial change in the kidneys. The spleen was slightly enlarged, and the liver gave a very decided iron reaction with ferrocyanide of potassium and hydrochloric acid.

2. J. H—, railway porter, æt. 37, first admitted October, 1892; died December, 1894.

No previous illness with the exception of measles in infancy. Despite a strong rheumatic family taint, he had not suffered in that way himself. A sister had for years had patches of leucoderma similar to those seen on this patient. Had always lived in England.

His illness commenced in 1892 with headache, languor, loss of appetite, discomfort after food, and obstinate constipation. At times he passed blood by the bowel. After five weeks' out-patient treatment he was admitted on October 14th, and was then found to have lost in weight 2 stone during the preceding eight months. Physical examination revealed nothing with the exception of extreme anæmia, there being but 4,000,000 red discs per c.mm., and only 53 per cent. of hæmoglobin. Under the use of arsenic and aperients the constipation disappeared, the red discs increased to 4,300,000 per c.mm., and he gained in weight 15 lbs., which gain subsequent residence at a convalescent home further increased. Within a fortnight of commencing work in January, 1893, his old symptoms began to return, and in March he again began to pass blood by the bowel; he was accordingly readmitted after attending as an out-patient for a month. The heart was now found to be moderately dilated, and a mitral systolic murmur present. The red discs were further reduced to 2,100,000 per c.mm., and the hæmoglobin to 38 per cent. Headache, both frontal and occipital, was complained of, and the weight had diminished 15 lbs. since discharge. The bowels were still very constipated, but no blood was observed in the motions. Arsenic was administered in increasing doses up to 8 minims of the liquor twice daily, with the production of itching, watery eyes, and sore throat. The red discs increased to 4,200,000 per c.mm., and the hæmoglobin to 70 per cent. In June he was again sent to a convalescent home, having now gained in weight 11 lbs. In July he began to relapse, and on October 3rd was readmitted, having lost 14 lbs. in weight, and complaining this time of diarrhœa. The heart was still rather large, and the edge of the spleen could just be felt. The urine was not abnormally dark-coloured, but now contained a trace of albumen. Dark pigmentation was now particularly noticed around the patches of leucoderma on the forearms. Improvement again resulted from the administration of arsenic, and he was discharged on December 12th. In January, 1894, he relapsed for the third time, and after keeping his bed for two months returned to hospital in June complaining of his old symptoms, having had in addition two fainting fits and further hæmorrhage from the bowel. It was now observed that there was considerable pigmentation of the trunk and limbs, but the face and buccal mucous membrane had escaped; the patches of leucoderma showed up in strong contrast to the pigmentation. The cardiac impulse was in the fifth intercostal space, only just internal to the nipple, and a loud systolic murmur was present with its maximum intensity at the impulse. The edge of the spleen could just be felt. The red discs were reduced to 1,200,000 per c.mm., and a small blotchy hæmorrhage was seen in the fundus of each eye. Albumen was occasionally present in small quantity in the urine, and the patient was very drowsy. Arsenic was resumed in 5-minim doses twice daily and subsequently increased to 7 minims, but on account of sickness was discontinued on June 26th and carbonate of iron substituted. The red discs on June 8th numbered 1,630,000 per c.mm., and the weight was 7 stone

—a gain of 10 lbs. since readmission. On July 21st the corpuscles had fallen to 1,360,000, and an attempt to resume arsenic resulted in diarrhœa. Arsenical treatment was, however, resumed on the 31st, with small quantities of opium, and by the end of August the corpuscles had risen to 1,470,000, and the general condition much improved; but diarrhœa again set in, with occasional sickness, and during September he lost ground, the corpuscles falling to 1,280,000 and the weight to 6 st. 8 lbs. Arsenic was again given in small doses in October, and again increase both in weight and richness of blood resulted. Albuminuria was still occasional. By this time the pigmentation of the skin had become almost universal, and was strikingly relieved here and there by the patches of leucoderma. The pigmentation was uniform and not spotty; the face retained a yellowish tinge, but was also becoming darker. Œdema of ankles was noticed on November 12th, and on this date treatment with bone marrow was commenced. No appreciable change in the blood resulted, and the weight remained about the same; the œdema, however, spread to the scrotum and lung bases, and some blood was passed by the bowel. After fifteen days' trial the bone marrow was discontinued. From this time onwards the œdema gradually increased, spreading to the trunk and arms, the corpuscles fell to 1,160,000, and death occurred from exhaustion on December 31st.

Post-mortem.—The pericardium contained about a pint of straw-coloured serum, and each lung was compressed by an effusion of 2½ pints of serum into its pleural sac. The heart weighed 10¼ ounces, and showed no dilatation. Both liver and kidneys contained a large quantity of iron, and the latter viscera showed cortical swelling but no marked interstitial change. There was a little free iron in the spleen. The supra-renal bodies were healthy. No other evidence of disease was found.

II. DISEASES OF THE RESPIRATORY ORGANS.

1. SARCOMA OF LUNG.

H. C—, æt. 5, admitted March 13th, died August 9th, 1894.

The boy had a good family history, and with the exception of bronchitis in infancy had enjoyed excellent health to within six months of admission, when a small lump which gradually increased was observed to project below the angle of the left scapula. No pain was noticed until the day before admission, but he was said to have had a slight cough for three weeks.

When he came under observation, an elastic tumour about the size of an orange, and firmly fixed to the chest-wall, projected just below and in front of the angle of the left scapula. Over the upper half of the chest on the same side, both in front and behind, the percussion note was dull, breath- and voice-sounds diminished, and vocal fremitus very slight. The heart was not displaced, the temperature normal, and there was no other sign of disease. The tumour was twice explored for fluid with negative result. The mass increased in size, and tubular breathing became audible over the front of the left lung, and a few

crepitations were also present. The veins over the chest became very distinct, and by April 10th distinct glandular enlargement in the axilla and neck could be made out; pain was also now becoming more troublesome. The legs became gradually weaker, and by the end of April there was very little voluntary power, the knee-jerks were exaggerated, and ankle-clonus was present; sensation was not affected. The tumour still slowly increased, and over the whole of the left side of the chest the breath-sounds were barely perceptible; the heart retained its normal position. Morphia was occasionally necessary to allay the pain. It was found early in June that the power of movement of the legs had considerably improved, but the external tumour was now twice as large as it was on admission. By the end of June the legs were again powerless, and inclined to become rigid; the patient's rest was now much disturbed, the heart beating in the epigastrium, having gradually changed its position, and there was evidence that the upper lobe of the right lung was becoming involved, the percussion resonance being much impaired and the breath-sounds tubular. The whole area of dulness now extended on the left side to the fourth rib in front and an inch below the angle of the scapula behind, whilst on the right it extended to the third rib in front and angle of scapula behind. The respirations averaged 40 per minute. The dull area extended slightly and the legs remained powerless, but did not waste out of proportion to the rest of the body. Death took place on August 7th, several attacks of extreme dyspnœa and cyanosis having occurred during the preceding seven days. Throughout the disease there was only occasional slight pyrexia.

Post-mortem.—The external mass of new growth was roughly hemispherical, 4 inches in diameter, and involved the angle of the left scapula and the adjacent ribs. The whole of the left lung with exception of the thin anterior margin of the base consisted of breaking-down new growth, which was continuous with the external mass, having extensively eroded the fifth to the eighth ribs. The upper and middle lobes of the right lung were similarly invaded, but the growth here was pearly white and firm, not softened like that on the opposite side. The lower lobe on this side was collapsed. The heart was strongly pushed forwards, and the bronchial lymphatic glands appeared healthy. The growth on the left side was adherent to the upper dorsal vertebræ, and was found to have infiltrated the dura mater in front of the cord opposite the bodies of the third, fourth, and fifth dorsal vertebræ for a distance of 2½ inches vertically; the cord itself on section appeared quite healthy. No secondary deposits. Other viscera healthy.

2. FOREIGN BODY IN LARYNX; TRACHEOTOMY; SUBSEQUENT REMOVAL.

P. M—, ventriloquist, æt. 23, admitted June 11th, discharged July 16th, 1894.

No illness since diphtheria at six years of age.

Eighteen months before admission he for the first time noticed slight stridor with his breathing, but this only troubled him during his ventriloquial performances, and remained stationary. During a journey from Munich to London in January he caught cold and suffered badly with dyspnœa, but recovered under treatment. Four days before admission dyspnœa again came on acutely, and when admitted he was in a condition of extreme cyanosis and making violent

respiratory efforts, with considerable laryngeal excursion. The larynx was much congested, the vocal cords moved freely, and nothing further could be seen.

A low tracheotomy was performed, with considerable relief. Examination of the larynx under more favourable conditions revealed the presence of a white body below the posterior extremities of the cords. On July 3rd the cricoid and upper ring of the trachea were divided, and a small "whistle" used in ventriloquial performances was removed; this was tightly fixed in the upper and back part of the cricoid cartilage, and corresponding to its site was an ulcerated surface. The patient had no recollection of how the whistle got there. Perfect recovery ensued.

III. DISEASES OF THE CIRCULATORY SYSTEM.

1. MALIGNANT ENDOCARDITIS; PERFORATION INTO PERICARDIUM.

A. M—, labourer, æt. 46, admitted October 15th, died October 18th, 1894.

A good family history. Of temperate habits; no history or evidence of syphilis. Suffered from rheumatism at age of fourteen, and twice subsequently. To within three months of admission had been occupied in the heaviest work with no ill effects, but in July found that his strength was failing him, and for two months had been subject to palpitation and dyspnœa. He was losing flesh.

When examined, the lungs showed no signs of disease beyond a few rhonchi and slight deficiency of movement. The area of cardiac dulness was considerably increased, commencing at the third costal cartilage above and extending a finger's breadth to the right of the sternum. A strong and well-defined impulse was felt in the sixth intercostal space ¾ inch external to the nipple line. A loud to-and-fro aortic murmur and a typically collapsing pulse were present. Temp. 99·4°; pulse 100. No other sign of disease. For the next two days he improved, but the temperature assumed an intermittent febrile type, rising towards night as high as 102°. On October 17th he complained of cardiac pain, the pulse ran up to 126, the temperature to 103·2°, and a trace of albumen was discovered in the urine. He expired quite suddenly at midday on the 18th after taking some food.

Post-mortem.—The pericardial sac was distended with coagulated blood. The heart weighed 24 ounces. Both right and left ventricles were dilated, the latter to an extreme degree, with apparently but little hypertrophy. The aortic valves were grossly diseased, being lacerated and torn in all directions; they were thickly coated with fibrin, and the posterior segment was bulged into a thin aneurysmal dilatation which had ruptured at one point. The endocardium in close proximity to this was ulcerated, and the ulceration had perforated the muscular substance of the heart immediately in front of the interauricular septum, the ventricle having discharged its contents into the pericardium. The ulcerative process had extended also to the base of the mitral flap, but the free margins of this valve were healthy. The aorta was atheromatous. The kidneys were extremely large and smooth. The cortices were broadened, in parts opaque;

the pyramids were congested. The spleen was large and diffluent, with one large old-standing infarct. Lungs œdematous. The other viscera presented nothing remarkable.

2. MITRAL INCOMPETENCE; PULMONARY THROMBOSIS.

F. F—, female æt. 13, admitted November 10th, died November 17th, 1894.

She had in early childhood contracted both scarlet fever and smallpox. For some months past had suffered from weakness and incapacity for work, but only began to complain of pain and stiffness of her joints two days prior to admission.

On admission both knee-joints were painful, swollen, and contained a little fluid. The heart's impulse was in the fifth space immediately below the nipple, and definitely localised, but the area of cardiac dulness was not increased in other directions. A mitral systolic murmur was present. Temp. 101·6°; pulse 120; resp. 30. No other evidence of disease. Under salicylate treatment she improved considerably until November 5th. She was then found to be breathing rapidly, the respirations being 42 per minute, the pulse 124, and temp. 99·6°; the percussion note was impaired over the base of each lung behind for about three fingers' breadth. She passed a noisy, restless night; the respirations increased to 62 and the pulse was 124. The dyspnœa continued to increase and the respirations reached 66 per minute; the heart's action was now rapid and irregular. The percussion resonance over the lungs was further diminished, but nowhere absent. The breath-sounds were harsh and a few crepitations audible. She died at noon.

Post-mortem.—The mitral valve allowed free regurgitation; it was thickened and contracted as the result of old disease, and also showed a fringe of recent vegetation. The left ventricle was slightly hypertrophied. Decolourised clot almost filled the right ventricle, and followed the pulmonary artery to its finest ramifications; it was not adherent to the vessel wall. Both lungs were collapsed, being of a dark violet colour and almost devoid of air. Remaining viscera appeared healthy.

IV. DISEASES OF THE LIVER.

1. ABSCESSES OF LIVER; ULCER OF CÆCUM; RIGHT EMPYEMA.

W. T—, hospital attendant, æt. 30, admitted April 28th, died May 28th, 1894. No family taint. Had only suffered from usual infantile diseases and influenza. Illness commenced six weeks before admission with shivering, headache, and loss of appetite; he took to his bed a fortnight later, complaining of great pain in the right side, and expectorated much yellowish material. The right pleura was twice aspirated, and pus withdrawn. He had lost nearly 2 st. in weight since the illness commenced.

When examined the respiratory movement on the right side of chest was

found deficient, and posteriorly and in the right axilla was every sign of fluid extending to within 1 inch of the angle of the scapula. Pulse 132; resp. 32. The abdomen appeared normal. No other sign of disease was found. On May 1st the right pleural sac was aspirated, and 22 ounces of reddish-coloured sweet pus withdrawn; the next day a part of the fifth rib was resected in the right axilla and the pleural sac drained. The resulting discharge was copious, but not at first offensive. Cough remained troublesome and irregular, intermittent fever continued. The discharge in a few days became offensive, and a trace of albumen appeared in the urine. The cavity was now irrigated with carbolic lotion and the discharge became sweeter, but the urine assumed a greenish tinge. Intermittent fever—at times reaching 104° F.—continued throughout the illness, and death occurred on May 28th.

Post-mortem.—The right pleura had been efficiently drained. The right lung was collapsed, airless, and firmly adherent by its base to the diaphragm, where an abscess in the right lobe of the liver was in communication through the diaphragm with an abscess in the right lower lobe of the lung; the abscess in the liver was about the size of a walnut, that in the lung as large as a Tangerine orange, and traversed by fibrous bands and thrombosed vessels. The liver was enlarged, and contained a number of abscesses, varying in size from a pea to a walnut, distributed throughout its substance; the pus was grey and viscid, and contained no ray fungi. The portal vein and its branches were neither diseased nor thrombosed. In the cæcum was a shallow healing ulcer $\frac{3}{8}$ inch in diameter. The spleen was large and soft, the kidneys swollen and hyperæmic.

2. SUPPURATIVE CHOLANGITIS; MALIGNANT ULCER OF DUODENUM.

F. G—, engine-driver, æt. 54, admitted September 5th, died October 16th, 1894.

Family history unimportant; no previous illness; a man of temperate habits. He first suffered from jaundice in January; the attack was unaccompanied by pain, and lasted three weeks; it then disappeared, but returned again two months later, and when he came under observation in July as an out-patient the liver was definitely enlarged, but still there was neither pain nor tenderness, and he continued his work till within a week of his admission on September 5th. He was then deeply jaundiced and rather emaciated. The liver was uniformly enlarged, but neither painful nor tender; its sharp edge extended just below the umbilicus, and the fundus of the gall-bladder could be felt. There was no effusion into the peritoneum, but the legs were slightly œdematous. The urine contained bile-pigment, and the motions were clay-coloured. There was no evidence of disease of the thoracic viscera. With rest in bed the œdema of legs soon subsided, but the jaundice persisted and the stools remained very pale; the gall-bladder became more distended. Diarrhœa set in on September 5th, and persisted until within a week of death, the stools remaining free from bile. A transitory attack of pain in the right side occurred on September 28th, and about this time a trace of albumen and a few sheaves of tyrosin were found in the urine; the average daily excretion of urea was 462 grains. Weight had diminished a stone since admission, weakness was progressive, and a condition of stupor had supervened. Up

to this time the temperature had been regularly intermittent, rising in the afternoon to 103° or more, and falling to subnormal in the morning; no rigors occurred. The diarrhœa was somewhat controlled by opium, and the excretion of urea fell during early part of October to an average of 313 grs. per diem; there was still an occasional trace of albumen. Distinct tenderness of the abdomen, especially over the liver, was observed on October 10th; the belly was now distended, and the temperature continuously subnormal. The stupor deepened into coma, and death resulted on October 16th.

Post-mortem.—A malignant ulcer of the duodenum about 1½ inches in diameter lay immediately over the orifice of the common bile-duct. The duct itself was considerably distended, and its orifice only admitted a fine probe; the gall-bladder was also much dilated, and both this and the ducts contained a thin muco-pus. The liver was considerably enlarged; its surface was covered with greyish-white areas varying in size from a pea to a florin; on section it was found to be riddled with numerous abscesses of varying size and shape, many containing inspissated pus. The portal vein was not thrombosed, and contained healthy-looking blood. There was slight general peritonitis, and the spleen was large and diffluent.

Upon microscopic examination the suppurating track in the liver appeared to follow the portal canals, and was probably in the bile-ducts, as the inflammation appeared most intense around these. In parts there was a definite formation of fibrous tissue in the neighbourhood of the inflammatory change, and in other parts lobules of the liver appeared to have necrosed and were on the point of breaking down.

(For "Acute Yellow Atrophy of Liver" see 'Clinical Journal,' December 12th, 1894.)

V. DISEASES OF FEMALE GENERATIVE ORGANS.

OVARIAN CYST; THROMBOSIS OF DEEP FEMORAL VEIN; PULMONARY EMBOLISM.

M. A. T—, æt. 47, married, admitted April 14th, died April 21st, 1894.

There was phthisis on the maternal side, her mother and two sisters having died from the disease. At the age of seventeen the patient suffered from hip-joint disease accompanied by discharging sinuses. She was not vaccinated, and was deeply scarred by smallpox, which she contracted in infancy. The present illness commenced with vomiting and diarrhœa twelve months before admission, but she had only noticed an abdominal swelling during the past four months. Catamenia present but irregular.

Examination of the abdomen revealed the presence of a somewhat tender, rounded body about the size of a small cocoa-nut in the right iliac fossa; a resistent mass was also felt in the left iliac fossa, and extended into the hypogastric and umbilical regions. As a result of vaginal examination an inflamed and adherent cystic right ovary, with displacement of the body of the uterus

forwards and to the left, was diagnosed. The percussion note at the apices of the lungs was impaired, and exaggeration of breath- and voice-sounds with increase of vocal fremitus was found at the right apex, but no moist sounds were present. The heart and vessels appeared normal. The scars of sinuses about the right hip and anchylosis in flexion remained as evidence of old joint disease.

Whilst under observation there was no fever, sickness, or diarrhœa, and the patient only complained of slight pain when the bowels were opened. On April 21st the patient whilst dressing suddenly fell backwards complaining of great epigastric pain. She rapidly became collapsed and pulseless, dying within ten minutes.

Post-mortem.—An ordinary multilocular ovarian cyst occupied the right half of the pelvis; it was closely adherent to the pelvic wall and to the vermiform appendix, which overhung it on the right, whilst in front and also adherent was the Fallopian tube. The contents of the cyst were viscid and dark brown. The left ovary was also slightly enlarged and cystic, and this, with omentum thickened by chronic local inflammation and some matted coils of intestine, filled up the left half of the pelvis, forming the second mass felt during life.

The apices of both upper lobes of the lungs were puckered and scarred, being the sites of obsolete tubercle. The pericardium was healthy, and the heart of normal size. Firm, partially decolourised clot occupied the pulmonary artery and its branches, extending into their subdivisions; the aortic valves were competent, but the mitral leaked, and a row of small warty growths were found on the auricular aspect of the latter valve; there was also a small recent growth on one of the aortic curtains.

Although there was nothing in the clinical history or appearance of the lower extremities to suggest thrombosis, yet on dissection the left profunda femoris vein was found blocked by a thrombus which projected into the lumen of the common femoral vein, and by detachment of a part of which the pulmonary thrombosis was in all probability occasioned.

VI. DISEASES OF THE NERVOUS SYSTEM.

CEREBELLAR ABSCESS; EVACUATION; RECOVERY.

A. J—, æt. 15, admitted May 10th, discharged July 26th, 1894.

Measles when six years of age, followed by right otitis media; otorrhœa had continued ever since.

Frontal headache and staggering five days before admission; vertigo, vomiting, nystagmus, and severe occipital headache one day later.

On examination he was found to be thin, pale, drowsy, and evidently very ill. He lay curled upon the left side, with general flexion of limbs; both eyes deviated to the left, nystagmus was present, the pupils were normal, and there were signs of early papillitis. There was no facial palsy, but the right arm and both legs were evidently weak, and the right knee-jerk increased. Fetid pus ran from the

right ear, but there were no abnormal signs over the mastoid. Temp. 96·2°; pulse 56.

On May 11th the mastoid was completely explored, and half an ounce of pus evacuated from the right lobe of the cerebellum.

The next day great improvement was manifest, there being no headache, vomiting, or deviation of eyes. Temp. 98·6°; pulse 84.

On May 20th symptoms suddenly all returned, and some reddish thin discharge was noticed on the dressing. On the 27th the pulse was 48; temp. 97°; vomiting frequent, and headache and vertigo complained of. A collection of blood was evacuated from the abscess cavity on this day, and more again on the 30th. From this date gradual convalescence.

SURGICAL REPORT.

1894.

By CUTHBERT S. WALLACE, M.B., B.S., F.R.C.S.

General Surgical Statement.

Number of surgical beds		241
„ of surgical patients in hospital, January 1st, 1894	Males	127
	Females	82
„ „ „ „ December 31st, 1894	Males	130
	Females	78
„ „ „ treated to a termination in 1894		3142

	Total.		Males.		Females.
Discharged cured	2203	...	1460	...	743
„ relieved	554	...	335	...	219
„ unrelieved	196	...	101	...	95
Died	189	...	123	...	66
Totals	3142		2019		1123

Average number of days in hospital—23·09.
Death rate = 6·01 per cent.

(Ophthalmic cases are not included in the above statement.)

TABLE I.—*Abstract, showing Diseases, &c., in Classes,*

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic.	Not stated.
GENERAL DISEASES.																		
Erysipelas	41	28	12	18	8	15	13	8	3	2	44	10	3	...	...	...	...	12
Tetanus	3	...	...	...	...	...	2	1	...	...	1	2	...	...	...	...	...	...
Pyæmia	...	2	...	...	1	...	...	1	...	...	1	...	...	1	...	...	...	...
Septicæmia	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...
Anthrax infection	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...
Syphilis, congenital	...	5	2	...	2	1	...	...	...	...	...	1	...	1	1	...	2	...
„ primary	2	2	...	...	3	...	1	...	...	...	...	...	1	...	1	...	...	1
„ secondary	2	21	...	...	8	13	1	1	...	...	...	1	3	3	13	...	3	...
„ tertiary	9	10	...	...	9	6	3	1	...	...	...	...	...	3	8	1	6	1
LOCAL DISEASES.																		
Carcinomata—																		
Spheroidal—																		
Breast	...	31	...	...	...	2	1	7	13	8	...	...	3	3	6	11	8	...
„ recurrent	...	5	...	...	...	...	...	2	2	1	...	...	...	...	...	1	4	...
„ „ in glands	...	4	...	...	...	...	...	2	1	1	...	...	...	...	...	1	3	...
Submaxillary gland	1	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...
Superior maxilla	...	1	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...
Pancreas	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...
Retained testis	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Recurrent of testis	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...
Urethra	...	2	...	...	...	...	...	...	1	1	...	...	...	...	2	...	...	...
Columnar—																		
Breast	...	2	...	...	...	...	1	...	...	1	...	...	...	...	1	...	1	...
Stomach	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Descending colon	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...
Rectum	9	8	...	...	...	2	...	3	6	6	...	...	...	2	7	4	4	...
Squamous—																		
Face	2	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	2	...
Cheek	2	1	...	...	...	...	...	...	3	...	...	...	...	2	1	...	...	...
Lower lip	9	1	...	...	...	...	...	...	3	6	...	...	...	2	3	2	3	...
Tongue	12	3	...	...	...	...	1	2	5	7	...	...	...	3	9	...	3	...
„ recurrent	3	...	...	...	...	...	...	1	2	...	...	...	...	...	...	1	1	1
Floor of mouth	2	1	...	...	...	...	...	1	1	1	...	...	...	1	1	...	1	...
„ „ recurrent	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
Glands of neck	5	...	...	...	...	...	...	...	3	2	...	...	...	...	1	1	3	...
Fauces	1	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...
Palate and cheek	1	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...
Epulis of jaw	2	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2
Larynx	1	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...
Œsophagus	9	...	...	...	...	...	1	3	5	...	...	...	1	...	6	...	1	1
Penis	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...

according to Authorised Nomenclature.

Duration of residence.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
12	33	18	5	1	...	...	...	...	62	1	...	6	Puerperal 1, scarlet fever 1.
1	1	...	1	...	...	...	...	...	1	...	...	2	
...	...	...	1	1	...	...	...	...	1	...	...	1	See Special Table.
...	1	...	...	...	...	...	...	...	...	...	...	1	See Special Table.
1	...	...	...	...	...	...	...	...	...	...	...	1	
1	1	1	1	1	...	...	...	...	1	1	1	2	Separation of humeral epiphysis 1.
...	...	2	2	...	...	...	...	...	3	1	...	...	
1	4	11	7	...	...	...	...	...	8	14	1	...	Readmissions 5.
...	6	5	7	...	...	...	...	1	13	5	1	...	Readmission 1.
3	2	16	10	...	...	...	...	...	25	...	5	1	Scarlet fever 1.
...	2	...	3	...	...	...	...	...	2	..	3	...	Erysipelas 1.
...	1	1	2	...	...	...	...	...	1	...	2	1	
...	...	1	...	...	...	...	...	...	...	...	1	...	
...	...	...	1	...	...	...	...	...	...	...	...	1	
...	...	...	..	1	...	...	...	...	...	...	...	1	
...	...	...	1	...	...	...	...	...	...	1	...	...	Secondary glands in abdomen.
...	...	...	...	1	...	...	...	...	...	1	...	...	Recurrent in spermatic cord.
...	...	2	...	...	...	...	...	...	...	2	...	...	
...	...	2	...	...	...	...	...	...	2	...	...	...	
1	...	...	...	...	...	...	..	...	...	...	...	1	Septic peritonitis 1.
...	...	...	1	...	...	...	...	...	...	1	...	...	
2	1	2	11	1	...	...	...	...	2	11	4	...	
...	...	...	2	...	...	...	...	...	1	1	...	...	Erysipelas 1. See Special Table.
...	1	1	1	...	...	...	...	...	2	...	1	...	
...	5	5	...	...	...	...	...	...	10	...	...	...	Epithelioma of penis 1.
2	7	5	...	1	...	...	...	...	11	...	4	...	
...	...	1	1	...	...	...	...	...	...	3	...	...	Erysipelas 1.
...	...	3	...	...	...	...	...	...	2	...	...	1	
...	...	1	...	...	...	...	...	...	...	1	...	...	Readmission.
...	...	4	1	...	...	...	...	...	1	4	...	...	Readmissions 2.
1	...	...	...	...	...	...	...	...	...	...	1	...	
...	...	1	...	...	...	...	..	...	...	...	...	1	
...	1	1	...	...	...	...	...	...	...	1	1	...	Upper 1, lower 1.
...	...	1	...	...	...	...	...	...	...	...	1	...	
1	4	...	3	1	...	...	...	...	..	4	...	5	Erysipelas 1, readmission 1.
...	...	...	...	1	...	...	...	...	...	...	...	1	Carcinoma of rectum 1. See also "Epithelioma of lip."

TABLE I.—*Abstract, showing Diseases, &c., in Classes,*

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic.	Not stated.
LOCAL DISEASES — *continued.*																		
Carcinomata—continued.																		
Squamous—																		
Scrotum	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
Labium	...	2	...	...	...	...	...	...	1	1	...	...	...	...	1	...	1	...
Vagina	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...
Hand	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...
Leg	3	...	...	...	...	...	...	1	2	...	...	...	...	...	1	2	...	...
Nature undetermined—																		
Neck	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
Stomach	2	...	...	...	...	...	...	1	...	1	...	...	...	1	1	...	...	...
Spleen	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...
Liver	1	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...
Omentum	...	1	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...
Abdomen	1	1	...	...	...	...	...	...	...	2	...	...	...	...	2	...	...	...
Phantom tumour	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...
Rodent ulcer	6	4	...	...	...	...	1	...	4	5	...	...	...	...	...	...	10	...
Sarcoma—																		
Frontal bone	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...
Superior maxilla	2	1	...	...	...	...	...	...	2	1	...	...	...	1	2	...	...	...
Inferior maxilla, recurrent	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...
Os innominatum	2	1	...	...	1	...	...	2	...	...	...	...	...	1	...	...	2	...
Sacrum	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...
Femur	...	1	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Fibula	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...
Tarsus	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Tonsil	1	1	...	...	2	...	...	...	...	...	...	...	...	...	2	...	...	...
Naso-pharynx	1	...	...	...	...	...	...	...	...	1	...	...	...	..	...	...	1	...
Neck	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...
Olecranon bursa	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...
Arm	...	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...
Testis	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...
Glands of groin	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Back, recurrent	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Popliteal space	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...
Buttock	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...
Skin	...	2	...	...	...	1	1	...	...	...	...	...	...	...	...	1	1	...
Cæcum	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Melanotic of clitoris	...	1	...	...	...	...	...	...	...	1	...	..	...	...	...	1	...	...

according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
...	...	...	1	...	...	...	...	...	1	...	...	...	
...	...	2	...	...	...	...	...	...	2	...	...	...	
...	...	1	...	...	...	...	...	...	...	...	1	...	Prolapsus uteri.
...	...	1	...	...	...	...	...	...	1	...	...	...	Dorsum excised.
1	1	1	...	...	...	...	...	...	...	...	3	...	In scar of burn 1, in chronic ulcers 2.
1	...	...	...	...	...	...	...	...	...	...	1	...	
1	...	1	...	...	...	...	...	...	...	...	1	1	See "Rodent ulcer." Cœliotomy 1; growth too extensive for removal.
1	...	...	...	...	...	...	...	...	...	...	1	...	
1	...	...	...	...	...	...	...	...	...	...	1	...	Transferred to Medical side.
...	...	1	...	...	...	...	...	...	...	...	1	...	
1	...	...	...	1	...	...	...	...	...	...	2	...	
...	...	...	1	...	...	...	...	...	1	...	...	...	
1	2	6	1	...	...	...	...	...	8	...	1	1	Carcinoma of stomach 1.
...	...	1	...	...	...	...	...	...	...	...	1	...	Undetermined.
...	2	1	...	...	...	...	...	...	...	1	2	...	Undetermined 2, mixed-celled 1.
...	...	1	...	...	...	...	...	...	...	...	1	...	Undetermined. Previous excision 2 years ago.
...	2	...	...	...	...	1	...	...	...	1	2	...	Round-celled 1, undetermined 1, pulsating 1, readmission 1.
...	1	...	...	...	...	...	...	...	...	...	...	1	Giant-celled.
...	...	...	1	...	...	...	...	...	...	...	...	1	Giant-celled.
...	...	...	...	1	...	...	...	...	1	...	...	...	Myxo-sarcoma.
...	...	1	...	...	...	...	...	...	...	...	1	...	Undetermined.
...	...	2	..	...	...	...	...	...	...	1	1	...	Undetermined 1, round-celled 1; removal in 1.
...	...	1	...	...	...	...	...	...	...	...	1	...	Undetermined.
...	...	1	...	...	...	...	...	...	...	...	1	...	Undetermined.
...	...	...	1	...	...	...	...	...	1	...	...	...	Spindle-celled; amputation of arm.
...	...	...	1	...	...	...	...	...	1	...	...	...	Undetermined.
...	...	...	1	...	...	...	...	...	1	...	...	...	Adeno-sarcoma; excision.
...	...	1	...	...	...	...	...	...	1	...	...	...	Myxo-sarcoma; excision.
...	...	...	1	...	...	...	...	...	...	1	...	...	Fibro-sarcoma.
...	...	...	1	...	...	...	...	...	1	...	...	...	Fibro-sarcoma; invaded muscles; excision.
...	...	1	...	...	...	...	...	...	...	...	1	...	Undetermined.
...	...	1	1	...	...	...	...	...	1	...	...	1	Fibro-sarcoma 1, round-celled 1.
...	1	...	...	...	...	...	...	...	...	...	...	1	Round-celled.
...	...	1	...	...	...	...	...	...	...	...	...	1	Erysipelas 1.

TABLE 1.—*Abstract, showing Diseases, &c., in Classes,*

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic	Not stated.
LOCAL DISEASES — *continued.*																		
Simple tumours—																		
Fibroma	1	2	...	...	1	...	2	...	...	...	...	...	...	...	...	1	2	...
Epulis	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...
Myxoma of popliteal space	2	...	...	...	...	...	2	...	...	...	...	...	...	1	...	1	...	...
Lipoma	10	10	...	1	2	5	2	3	5	2	...	...	...	...	2	3	14	1
Enchondroma	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Exostosis	7	2	...	...	7	...	2	...	...	...	...	...	...	1	1	...	6	1
Granular pharyngitis	1	...	...	..	...	...	1	...	...	...	...	...	...	...	1	...	...	...
Adenoid vegetations	9	8	1	3	11	2	...	...	...	...	...	...	...	1	1	...	10	5
Tonsils	2	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	2	...
Nasal polypi	7	1	...	...	4	3	...	1	...	...	...	...	...	...	...	...	8	...
Papilloma	2	2	...	...	1	1	1	...	1	...	...	...	...	...	...	1	3	...
Nævus	2	10	8	2	2	...	...	...	...	...	...	...	...	...	3	2	7	...
„ lymphatic	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...
Duct papilloma	...	2	...	...	...	...	...	1	1	...	...	...	...	1	...	...	1	...
Rectal polypi	1	4	...	...	1	1	1	1	...	1	...	...	...	...	2	3	...	...
Submaxillary tumour	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...
Fibro-adenoma of breast	...	7	...	...	1	4	2	...	...	...	...	...	...	1	2	1	3	...
Urethral caruncle	...	1	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...
Sacro-coccygeal tumour	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Adenoma of skin	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...
Tuberculous granuloma	1	..	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Uterine myoma	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Cysts—																		
Dermoid	5	1	1	1	...	2	2	...	...	...	...	...	...	...	...	...	6	...
Multilocular of neck	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...
Ranula	...	2	...	...	...	2	...	...	...	...	...	...	1	1	...	...	...	...
Cyst in connection with tooth-fang	1	1	...	...	...	...	2	...	...	...	...	...	...	...	1	...	1	...
Sebaceous	4	3	...	...	...	1	1	1	2	2	...	...	...	...	2	...	5	...
Mastoid	1	...	..	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Labial	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...
Calf	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...
Breast	...	2	...	...	...	1	...	1	...	...	...	...	...	...	2	...	..	...
Pancreatic	...	1	...	...	..	...	1	...	...	...	...	...	...	...	...	...	1	...
Parovarian	...	2	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2	...
Dermoid of ovary	...	2	...	...	1	...	1	...	...	...	...	...	...	..	2	...	...	...
Ovarian	...	11	...	...	4	...	1	3	1	2	...	...	...	...	5	5	1	...

according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts 1–2	Mts 2–4	Mts 4–6	Mts 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
...	1	1	...	1	...	...	...	...	3	...	...	...	Periosteal of femur 1, median nerve 1, extensor tendons 1; removal in 2.
1	...	...	...	...	...	...	...	...	1	...	...	...	
...	1	...	1	...	...	...	...	...	1	...	1	...	Same case.
2	9	9	...	...	...	...	...	...	18	...	2	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	
...	7	1	...	1	...	...	...	...	8	1	...	...	Recurrent 1, multiple of femoral neck 2, subungual 7; removal in 8.
1	...	...	...	...	...	...	...	...	...	1	...	...	
11	6	...	...	...	..	...	...	...	17	...	...	...	Deflexion of septum 1, otitis media 1; removal in 12.
2	...	...	...	...	...	...	...	...	1	...	1	...	
2	3	3	...	...	...	...	...	...	7	...	1	...	Recurrent 7; removal in 7; Roux's operation 1.
...	1	1	2	...	...	...	...	...	4	...	...	...	Of kidney 1; nephrectomy 1; stone in kidney 1; neck 1, vulva 2.
...	3	8	...	1	...	...	...	...	11	1	...	...	
...	...	...	..	...	1	...	...	...	...	1	...	...	Face.
...	...	1	1	...	...	...	...	...	2	...	...	...	
...	2	3	...	...	...	...	...	...	5	...	..	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	
...	1	3	3	...	...	...	...	...	7	...	...	...	
...	...	...	1	...	...	...	...	...	1	...	...	...	
...	...	...	...	1	...	...	...	...	...	...	1	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	
...	...	...	1	...	...	...	...	...	1	...	...	...	Of spermatic cord.
...	...	...	1	...	...	...	...	...	1	...	...	...	
2	2	2	...	...	...	...	...	...	6	...	...	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	
1	1	...	...	...	...	...	...	...	...	2	...	...	Same case.
...	1	1	...	...	...	...	...	...	2	...	...	...	
...	7	..	...	...	...	...	...	...	6	...	1	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	
...	...	...	1	...	...	...	...	...	1	..	...	...	Morrant Baker's cyst; tuberculous; excision.
...	1	1	...	...	...	...	...	...	2	...	...	...	Chronic interstitial mastitis 2.
...	...	...	...	1	...	...	...	...	1	...	...	...	
...	1	...	1	...	...	...	...	...	...	2	...	...	Same case.
...	...	...	2	. .	...	...	...	...	2	...	...	...	
1	...	4	4	2	...	...	...	...	5	2	2	2	Readmissions 2, uterine myoma 1.

TABLE I.—*Abstract, showing Diseases, &c., in Classes,*

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic.	Not stated.
RESPIRATORY SYSTEM.																		
Rhinitis	...	3	...	...	1	2	...	...	...	...	...	1	...	...	...	...	2	...
Polyp of larynx	...	2	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2	...
Necrosis of cricoid	...	1	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...
Abscess of epiglottis	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Empyema of antrum	...	5	...	...	...	3	2	...	...	...	...	...	...	...	...	...	5	...
Hernia of lung	2	...	2	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...
Old empyema	5	...	...	...	1	...	...	1	3	...	...	...	...	...	2	2	1	...
NERVOUS SYSTEM.																		
Meningitis	...	1	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Fits	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...
Neuralgia	3	...	...	...	...	...	...	1	1	1	...	...	...	...	...	...	3	...
Headache	2	...	...	...	1	...	1	...	...	...	...	...	...	...	1	...	1	...
Peripheral neuritis	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...
Sciatica	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...
Old injury of brachial plexus	2	...	...	...	...	...	...	1	1	...	...	...	1	...	...	1	...	...
Do., ulnar nerve	...	2	...	...	2	...	...	...	...	...	1	...	...	...	...	1	...	...
Do., musculo-spiral nerve	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...
Do., median and ulnar nerves	2	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2	...	...
Gumma of cauda equina	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
THYROID.																		
Parenchymatous enlargement	2	2	...	...	4	...	...	...	...	...	...	...	...	...	3	1	...	...
Adenoma	...	7	...	...	...	5	1	...	1	...	...	...	...	...	...	...	7	...
Multilobular general enlargement	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...
Cyst	...	1	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...
VASCULAR SYSTEM.																		
Varicose veins	52	22	...	...	18	37	8	7	4	...	...	...	4	2	5	3	49	11
Thrombosis	2	6	...	...	5	1	1	...	...	1	1	1	3	1	...	1	...	1
Traumatic gangrene	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...
Septic traumatic gangrene	1	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...
Diabetic gangrene	1	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...
Gangrene	3	5	...	...	...	1	2	2	...	3	2	2	2	1	...	...	...	1
Hæmorrhage from umbilicus	1	...	1	...	...	...	...	...	...	..	1	...	...	...	...	...	...	...
Traumatic aneurysm	3	...	...	...	2	...	...	...	...	1	1	1	...	...	...	...	...	1
Popliteal aneurysm	1	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...
Varicocele	45	...	...	...	26	19	...	...	...	...	1	...	3	4	3	2	16	16

according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
...	3	..	...	...	...	...	...	...	...	3	...	...	
...	...	2	...	...	...	...	...	...	1	...	1	...	Same case.
...	...	...	1	...	...	...	...	...	...	1	...	...	Tracheotomy.
...	...	...	1	...	...	...	...	...	...	...	...	1	Broncho-pneumonia.
...	1	3	1	...	...	...	...	...	...	5	...	...	
...	...	...	1	1	...	...	...	...	...	2	...	...	Same case; cervical; whooping cough.
...	...	...	3	1	...	...	...	...	1	4	...	...	Readmissions 2.
1	...	...	...	...	...	...	...	...	...	...	1	...	
...	1	...	...	...	...	...	...	...	...	...	1	...	None in hospital.
...	1	1	1	...	...	...	...	...	...	2	1	...	Trigeminal 1; previous excision of Meckle's ganglion.
1	1	...	...	...	...	...	...	...	...	1	1	...	
...	1	...	...	...	...	...	...	...	...	...	1	...	Transferred to Medical side.
...	1	...	...	...	...	...	...	...	...	1	...	...	Transferred to Medical side.
...	...	1	1	...	...	...	...	...	1	1	...	...	
...	...	1	1	...	...	...	...	...	1	1	...	...	
...	1	...	...	...	...	...	...	...	...	1	...	...	
...	...	2	...	...	...	...	...	...	...	2	...	...	
...	1	...	...	...	...	...	...	...	...	...	1	...	Transferred to Medical side.
...	2	2	...	...	...	...	...	...	...	1	2	1	Readmission 1.
1	1	4	1	...	...	...	...	...	5	1	1	...	Readmission 1.
...	1	...	...	...	...	...	...	...	...	...	1	...	To come in again.
...	1	...	...	...	...	...	...	...	1	...	...	...	
2	10	46	14	...	2	...	...	...	67	3	4	...	Pyæmia 1, erysipelas 1; readmissions 3; exostosis of tibia 1, hammer-toe 1.
...	2	6	...	...	...	...	...	...	6	2	...	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	Foot.
...	1	...	...	...	...	...	...	...	...	...	...	1	Leg.
...	1	...	..	...	...	...	...	...	...	...	...	1	
...	4	3	1	...	...	...	...	...	4	1	2	1	
1	...	...	...	...	...	...	...	...	1	...	...	...	
...	1	...	2	...	...	...	...	...	3	...	...	...	Cellulitis of forearm 2.
...	...	...	1	...	...	...	...	...	1	...	...	...	
1	6	31	6	1	...	...	...	...	43	...	2	...	

TABLE I.—*Abstract, showing Diseases, &c., in Classes,*

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic.	Not stated.
LYMPHATIC SYSTEM.																		
Macroglossia	...	1	...	...	1	...	...	...	...	...	...	...	...	...	..	...	1	...
Lymphadenoma	3	...	...	...	...	2	...	1	...	...	...	...	1	2	...	...	...	...
Lymphangitis	12	2	2	1	4	4	2	1	...	...	5	7	...	...	...	..	...	2
Adenitis, simple	9	6	3	2	3	4	1	2	...	...	1	4	2	3	...	...	5	...
„ tuberculous	40	25	3	9	20	22	6	4	1	...	...	...	4	6	10	12	29	4
DIGESTIVE SYSTEM.																		
Parotid salivary fistula	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...
Ulcerative stomatitis	...	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Hernia—																		
Inguinal, reducible	91	9	2	2	33	27	18	12	3	3	...	5	4	11	16	12	51	1
Do., irreducible	18	...	4	...	...	2	3	5	2	2	3	1	...	...	...	2	12	...
Do., do., inflamed	3	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	3	...
Do., strangulated	38	1	6	...	2	10	3	3	6	9	39	...	...	...	...	...	...	...
Femoral, reducible	4	3	...	...	2	2	3	...	...	...	...	...	...	...	1	3	3	...
Do., irreducible	1	4	...	...	...	...	1	3	1	...	...	...	...	...	...	...	5	...
Do., strangulated	1	15	...	...	...	...	5	3	3	5	14	2	...	...	...	...	...	...
Umbilical, reducible, congenital	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Do., irreducible	...	5	...	...	...	...	...	4	1	...	...	...	...	...	...	...	5	...
Do., strangulated	...	3	...	...	...	...	...	1	2	...	2	1	...	...	...	...	...	...
Ventral, irreducible	1	...	...	...	...	...	1	..	...	...	...	...	...	...	...	...	1	...
Median fæcal fistula	...	2	...	...	1	1	...	...	...	...	...	...	...	1	...	...	1	...
Foreign body swallowed	...	1	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...
Paralysis of bowel after hernia	1	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...
Appendicitis, recurrent	2	...	...	...	...	...	2	...	...	...	...	...	...	...	1	...	1	...
„ acute	...	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...
„ sinus	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...
Artificial anus	...	1	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...
Hæmorrhoids	28	12	...	...	...	5	15	11	6	3	...	1	1	...	2	...	36	...
„ prolapsed	2	1	...	...	...	1	1	...	1	...	...	...	...	1	...	...	2	...
Prolapsus recti	3	4	7	...	...	...	...	...	...	...	1	1	...	1	...	3	...	1
Fissure of anus	2	4	...	...	1	1	4	...	...	...	...	...	...	1	5	...	...	...
Fistula in ano	35	8	...	...	1	10	16	13	3	...	...	1	4	12	10	1	15	...
Catarrh of rectum	1	2	...	...	...	...	2	1	...	...	...	...	...	...	...	1	2	...
Hæmorrhage from rectum	1	1	...	1	...	...	...	1	...	...	...	...	1	...	...	...	1	...
Stricture of rectum	1	1	...	...	...	...	2	...	...	...	...	...	...	...	2	...	...	...
Biliary fistula	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...
Gall-stones	...	2	...	...	...	...	1	...	1	...	...	...	...	...	...	...	2	...
GENITO-URINARY SYSTEM.																		
Phimosis	9	...	2	2	2	2	1	...	...	...	...	...	...	...	...	...	9	...
Venereal warts	..	6	...	...	3	3	...	...	...	...	...	...	...	2	2	...	1	1
Phagedæna	...	1	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...

according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
...	...	...	...	1	...	...	...	...	1	...	...	...	
1	1	1	...	...	...	...	...	...	...	...	3	...	Readmission 1.
7	6	1	...	...	...	...	...	...	14	...	...	...	
2	7	5	1	...	...	...	...	...	14	...	1	...	
3	20	32	9	1	...	...	...	...	53	8	3	1	Tuberculous kidney 1. Fatal case: pneumonia.
...	...	1	...	...	...	...	...	...	...	...	1	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	
5	10	54	30	1	...	...	...	...	85	6	8	1	See Special Table.
7	2	5	3	1	...	...	...	...	9	8	...	1	
...	1	1	...	1	...	...	...	...	...	3	...	...	Readmission 1.
3	9	20	7	...	...	...	...	...	36	...	...	3	
1	...	5	1	...	...	...	...	...	6	1	...	...	
...	1	3	1	...	...	...	...	...	4	1	...	...	
5	3	7	1	...	...	...	...	...	10	...	...	6	
1	...	...	...	...	...	...	...	...	...	...	1	...	Refused treatment.
...	...	3	...	2	...	...	...	..	2	3	...	...	
2	1	...	...	...	...	...	...	..	...	...	...	3	
...	...	...	1	...	...	...	...	...	1	...	...	...	
1	...	...	1	...	...	...	...	...	...	1	1	...	
1	...	...	...	...	...	...	...	...	1	...	...	...	
1	...	...	...	...	...	...	...	...	...	...	...	1	
...	...	...	...	1	1	...	...	...	1	1	...	...	
1	...	...	...	...	...	...	...	...	...	...	...	1	
...	...	...	...	1	...	...	...	...	...	1	...	...	
...	...	...	1	...	...	...	...	...	1	...	...	...	
2	3	28	7	...	...	...	...	...	36	...	4	...	
...	...	3	...	...	...	...	...	...	2	...	1	...	
2	1	3	1	...	...	...	...	...	3	4	...	...	Readmission 1.
1	4	1	...	...	...	...	...	...	4	1	1	...	Readmission 1.
2	10	19	11	1	...	...	...	...	40	1	2	...	
...	1	1	1	...	...	...	...	...	...	2	1	...	
...	2	...	...	...	...	...	...	...	...	1	1	...	Cirrhosis 1.
...	...	...	2	...	...	...	...	...	...	2	...	...	
...	...	...	1	...	...	...	...	...	...	1	...	...	
...	...	...	2	...	...	...	...	...	2	...	...	...	
4	3	2	...	...	...	...	...	...	9	...	...	...	Sloughing 1.
...	1	1	1	3	...	...	...	...	5	1	...	...	
1	...	...	...	...	...	...	...	...	...	...	1	...	

TABLE I.—*Abstract, showing Diseases, &c., in Classes,*

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1-4	Dys 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic.	Not stated.
GENITO-URINARY SYSTEM —*continued.*																		
Soft chancre	...	4	...	...	1	3	...	...	...	...	...	...	2	...	...	...	...	2
Vulvitis	...	3	...	1	1	1	...	...	...	...	...	2	...	...	...	1	...	...
Stricture	18	...	...	...	1	3	8	5	1	...	...	...	...	...	2	1	15	...
Retention	20	...	...	...	...	4	4	5	2	5	18	2	...	...	...	...	...	...
Extravasation of urine	2	...	...	...	...	...	1	1	...	...	1	1	...	...	...	...	...	...
Subacute prostatitis	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...
Enlarged prostate	5	...	...	...	...	...	...	...	2	3	...	...	...	...	1	3	1	...
Cystitis	5	2	...	...	1	1	2	1	1	1	1	...	...	2	...	2	2	...
,, tuberculous	2	1	...	...	...	...	3	...	...	...	...	...	...	1	...	...	2	...
Incontinence of urine	4	2	...	3	2	1	...	...	...	...	...	1	...	...	...	...	5	...
Hæmaturia	4	1	...	1	...	1	1	1	...	1	2	...	1	...	...	...	2	...
Sinus, supra-pubic	3	...	...	2	...	...	...	...	...	1	...	...	1	2	...	...	...	...
Urinary fistula—																		
Penile	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...
Perinæal	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Recto-vesical	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Recto-urethral	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...
Renal	2	...	...	...	...	1	...	1	...	...	...	...	...	1	...	...	1	...
Vesical calculus	9	...	3	1	...	...	1	...	2	2	...	...	2	...	4	1	1	1
Urethral calculus	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Renal calculus	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...
,, lithiasis	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...
Nephralgia	3	...	...	...	...	3	...	...	...	...	...	...	...	...	1	...	2	...
Hydronephrosis	...	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...
Pyonephrosis	1	2	...	...	...	...	1	2	...	...	...	...	...	1	1	...	1	...
Tuberculous kidney	2	2	...	...	1	3	...	...	...	...	...	...	2	1	1	...	...	...
Movable kidney	...	3	...	...	...	1	1	1	...	...	...	...	...	...	...	...	3	...
Perinephritic abscess	1	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...
Hydrocele of cord	3	...	..	...	1	2	...	...	...	...	1	...	1	...	...	...	1	...
Hydrocele of tunica vaginalis	12	...	1	1	5	1	...	2	...	2	1	...	...	...	2	3	6	...
Spermatocele	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Undescended testis	4	...	...	2	2	...	...	...	...	...	...	1	...	...	...	...	3	...
Acute orchitis and epididymitis	5	...	...	...	...	2	2	1	...	...	...	...	...	2	2	...	1	...
Gummatous orchitis	5	...	...	...	...	2	2	1	...	...	...	...	...	2	2	...	1	...
Tuberculous testis	4	...	...	...	1	2	...	1	...	...	...	...	2	...	...	...	2	...
Tuberculous vesiculæ seminales	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...
Tuberculous abscess of spermatic cord	1	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...
Chronic interstitial mastitis	...	5	...	...	...	...	2	2	1	...	...	...	...	1	...	...	4	...
Chronic abscess of breast	...	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...

ccording to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
)ys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
...	1	3	...	...	...	...	...	...	4	...	...	...	
1	...	2	...	...	...	...	...	...	2	...	1	...	
1	1	7	6	2	1	...	...	...	17	...	1	...	Pyæmia 1. See Special Table.
7	4	5	4	...	...	...	...	...	16	1	...	3	
1	...	...	...	1	...	...	...	...	1	...	...	1	
...	1	...	...	...	...	...	...	...	1	...	...	...	
1	3	...	...	1	...	...	...	...	...	2	2	1	Readmission 1.
...	2	4	1	...	...	...	...	...	1	4	2	...	
...	...	1	2	...	...	...	...	...	...	3	...	...	
1	4	...	...	1	...	...	...	...	1	4	1	...	
...	2	1	1	1	...	...	...	...	1	3	1	...	
...	...	2	1	...	...	...	...	...	1	1	1	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	Excision.
...	...	...	1	...	...	...	...	...	...	1	...	...	External urethrotomy 1.
...	...	1	...	...	...	...	...	...	...	1	...	...	
...	...	...	1	...	...	...	...	...	...	1	...	...	Fistula in ano 1.
1	...	...	1	...	...	...	...	...	2	...	...	...	
...	...	4	4	...	1	...	...	...	8	...	...	1	Pyæmia 1. See Special Table.
1	...	...	...	...	...	...	...	...	1	...	...	...	Impacted.
...	...	1	...	...	...	...	...	...	...	...	...	1	See also "Renal fistula."
...	...	...	...	1	...	...	...	...	1	...	...	...	
...	1	...	2	...	...	...	...	...	...	1	2	...	
...	...	...	1	...	...	...	...	...	...	1	...	...	
...	...	...	3	...	...	...	...	...	1	...	1	1	
...	2	...	1	1	...	...	...	...	..	1	2	1	Readmission 1. Transferred to Medical side 1.
1	1	1	...	...	...	...	...	...	...	2	1	...	Enlarged spleen 1.
...	...	...	...	1	...	...	...	...	...	1	...	...	
...	...	3	...	...	...	...	...	...	3	...	...	...	Communicated with abdomen 1. Excision in all.
1	4	5	2	...	...	...	...	...	10	...	1	1	
...	1	...	...	...	...	...	...	...	1	...	...	...	Excision.
1	...	1	2	...	...	...	...	...	3	...	1	...	
1	2	1	1	...	...	...	...	...	4	1	...	...	
1	1	1	1	1	...	...	...	...	2	2	1	...	
...	...	2	2	...	...	...	...	...	3	1	...	...	
...	...	...	1	...	...	...	...	...	...	...	1	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	
...	...	3	2	...	...	...	...	...	5	...	...	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	

TABLE I.—*Abstract, showing Diseases, &c., in Classes,*

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–6	Mts. 6–12	Chronic.	Not stated.
GENITO-URINARY SYSTEM —*continued.*																		
Tuberculous abscess of breast	...	3	...	...	...	3	...	...	...	...	...	...	...	1	1	1	...	...
Pyosalpinx	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...
Pelvic peritonitis	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
OSSEOUS SYSTEM.																		
Acute epiphysitis—																		
Humerus	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Femur	2	...	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
Tibia	...	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Syphilitic epiphysitis—																		
Humerus	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Tubercular epiphysitis—																		
Humerus	2	1	...	3	...	...	...	...	...	...	...	1	...	2	...	...	...	...
Tibia	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Periostitis—																		
Inferior maxilla	1	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...
Tibia	1	1	...	...	...	1	1	...	...	...	...	...	...	1	...	1	...	...
Os calcis	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Osteitis—																		
Skull	2	...	...	...	...	...	...	...	2	...	...	...	...	...	1	1	...	...
Phalanx	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...
Humerus	1	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Femur	2	...	...	1	...	...	1	...	...	...	...	...	...	...	1	...	1	...
Tibia	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...
Caries—																		
Rib	8	3	2	1	2	3	2	1	...	...	...	1	...	1	3	2	3	1
Sternum	2	...	...	...	2	...	...	...	...	...	...	...	1	...	...	1	...	...
Scapula	3	...	...	2	1	...	...	...	...	...	...	1	...	...	...	...	2	...
Humerus	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...
Ulna	...	2	1	...	...	1	...	...	...	...	...	...	...	...	...	...	2	...
Sacrum	2	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2	...
Ilium	1	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...
Femur	2	1	...	1	...	...	1	1	...	...	...	...	...	1	...	...	2	...
Tibia	...	2	...	...	2	...	...	...	...	...	...	...	...	1	...	...	1	...
Os calcis	...	2	...	1	...	1	...	...	...	...	...	...	2	...	...	...	...	...
Metatarsus	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Abscess of bone—																		
Ulna	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Femur	...	1	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...
Acute necrosis—																		
Radius	...	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Femur	...	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...

cording to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
ys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
..	1	1	1	...	...	...	...	...	3	...	...	...	Readmission 1. Excision in all.
..	1	...	...	...	...	...	...	...	...	...	...	1	
..	1	...	...	...	...	...	...	...	...	...	1	...	
..	1	...	...	. .	...	...	...	...	1	...	...	...	Lower epiphysis.
1	...	...	...	1	...	...	...	...	...	1	...	1	Both lower epiphysis. Fatal case: asthenia.
..	1	...	...	...	...	...	...	...	...	1		...	Upper epiphysis.
..	...	1	...	...	...	...	...	...	...	1	...	...	Upper extremity.
..	...	1	2	...	...	...	...	...	1	2	...	...	Upper epiphysis. Readmission 1. Of femur 1.
..	...	1	...	...	...	...	...	...	...	1	...	...	Upper epiphysis.
..	1	...	...	...	...	...	...	...	1	..	...	...	
..	...	1	...	...	...	1	...	...	...	2	...	...	Syphilitic 2; syphilitic testis 1.
..	...	1	...	...	...	...	...	...	1	...	...	...	
..	...	1	...	...	1	...	...	...	...	2	...	...	Same case. Previous depressed fracture of skull.
..	...	1	...	...	...	...	...	...	1	...	...	...	Tuberculous.
..	...	1	...	...	..	...	...	...	...	1	...	...	Syphilitic.
..	...	...	2	...	...	...	...	...	1	1	...	...	Traumatic 1; tuberculous 1.
..	...	1	...	...	...	...	...	...	1	...	...	...	Tuberculous.
..	4	...	6	1	...	...	...	...	6	4	1	...	Readmissions 2. Tuberculous sterno-clavicular joint 1.
..	...	...	1	1	..	...	...	...	...	2	...	...	Readmission 1.
..	...	2	1	...	...	...	...	...	1	2	...	...	Readmission 1.
..	...	1	...	...	...	...	...	...	1	...	...	...	
..	...	1	1	...	...	...	...	...	2	...	...	...	
..	...	1	1	...	...	...	...	...	...	2	...	...	
..	...	...	...	...	...	1	...	...	...	1	...	...	
..	...	1	1	1	...	...	...	...	2	1	...	...	
..	...	...	1	1	...	...	...	...	1	1	...	...	
..	1	...	1	...	...	...	...	...	1	1	...	...	
..	...	...	...	1	...	...	...	...	1	...	...	...	
..	...	1	...	...	...	...	...	...	...	1	...	...	
..	...	...	...	1	...	...	...	...	...	1	...	...	Trochanter major.
..	...	1	...	...	...	...	...	...	1	...	...	...	
..	...	...	...	1	...	...	...	...	...	...	...	1	Pyæmia 1. See Special Table.

TABLE I.—*Abstract, showing Diseases, &c., in Classes,*

DISEASE.	Sex.		Age.								Duration before admission.						
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic.	Not stated.
OSSEOUS SYSTEM — *continued.*																		
Acute necrosis (continued)																		
Tibia	4	1	...	2	3	...	...	...	...	...	3	1	1	...	...	...	...	...
Fibula	1	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Os calcis	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...
Necrosis—																		
Inferior maxilla	8	5	2	1	1	4	1	4	...	...	...	1	1	3	3	2	3	...
Ulna	2	...	...	...	...	1	...	1	...	...	...	...	...	...	1	1	...	...
Pelvis	8	1	...	1	4	2	2	...	...	...	...	...	...	...	2	1	6	...
Femur	6	2	...	...	5	1	...	1	...	1	...	...	...	...	1	1	5	1
Tibia	11	5	...	3	4	3	2	...	2	2	...	...	...	2	2	2	10	...
Phalanges	3	...	...	...	...	...	1	1	1	...	...	1	...	2	...	...	...	...
ARTICULAR SYSTEM.																		
Shoulder—																		
Tuberculous arthritis	1	4	...	...	...	3	1	1	...	...	...	...	...	1	1	1	2	...
Ankylosis	2	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	2	...
Adhesions in joint	2	...	...	...	...	...	...	1	1	...	...	...	2	...	...	...	...	...
Elbow—																		
Tuberculous arthritis	10	4	4	2	3	2	2	1	...	...	...	...	...	1	3	3	7	...
Ankylosis	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...
Adhesions in joint	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Wrist—																		
Tuberculous arthritis	1	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...
Hip—																		
Tuberculous arthritis	19	12	4	9	15	2	...	1	...	...	1	...	5	2	4	6	12	1
Hysterical	...	2	...	...	1	1	...	...	...	...	...	...	...	1	...	...	...	...
Pyæmic arthritis	...	1	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Gonorrhœal arthritis	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Arthritis (nature unknown)	1	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...
Rheumatoid arthritis	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
Ankylosis	10	8	...	5	12	1	...	...	...	...	...	...	...	...	3	1	14	...
Adhesions in joint	1	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...
Knee—																		
Tuberculous arthritis	18	9	5	4	10	3	1	1	2	1	...	...	...	3	5	...	19	...
Previous excision	...	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...
Syphilitic synovitis	4	1	...	...	2	1	2	...	...	...	...	...	...	1	3	...	1	...
Gummatous synovitis	1	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...
Gonorrhœal arthritis	1	1	...	...	...	2	...	...	...	...	...	...	...	1	...	...	...	1
Suppurative arthritis	2	...	1	1	...	...	...	...	...	...	...	1	...	...	1	...	...	...
Rheumatoid	1	2	...	...	...	1	...	...	1	1	...	1	...	...	2	...	...	...
Loose body	6	1	...	...	1	2	3	...	1	...	1	...	...	...	2	...	4	...
Displaced cartilage	3	...	...	...	...	2	...	1	...	...	...	...	...	...	...	...	2	1

according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R	U.	D.	
...	1	1	3	...	...	...	...	...	2	2	...	1	Pyæmia 1. See Special Table.
...	...	...	1	...	...	...	...	...	1	...	...	...	
...	...	...	1	...	...	...	...	...	1	...	...	...	
1	4	5	1	2	...	...	...	...	6	6	...	1	Ununited fracture of inferior maxilla 1. Fatal case: asthenia.
...	1	1	...	...	...	...	...	...	1	...	1	...	
...	...	1	5	2	1	...	...	...	1	7	...	1	
...	...	3	1	4	...	...	...	...	2	6	...	...	Popliteal 1, syphilitic 1. Readmissions 2.
1	4	5	6	...	...	...	...	...	4	11	...	1	Readmission 1. Syphilitic 1.
...	2	...	...	1	...	...	...	...	3	...	...	...	
...	1	1	3	...	...	...	...	...	...	5	...	...	Readmission 1.
...	2	...	...	...	...	...	...	...	...	1	1	...	Previous tuberculous disease in both.
1	...	...	...	1	...	...	...	...	...	2	...	...	Previous dislocation in both.
1	1	6	3	2	...	1	...	...	3	10	1	...	Readmissions 4. Ankylosis of hip 1.
...	...	1	...	...	...	...	...	...	...	1	...	...	Fibrous. Previous tuberculous disease.
...	...	...	1	...	...	...	...	...	1	...	...	...	
...	...	...	1	...	...	...	...	...	1	...	...	...	Excision followed by amputation.
2	5	3	13	6	1	1	...	...	4	27	...	...	Readmissions 3.
...	1	...	1	...	...	...	...	...	2	...	...	...	
...	...	...	1	...	...	...	...	...	...	1	...	...	Excision.
...	...	...	1	...	...	...	...	...	...	1	...	...	
...	...	...	...	1	...	...	...	...	...	1	...	...	Excision.
...	1	...	...	...	...	...	...	...	...	1	...	...	
...	5	2	4	4	...	3	...	...	8	9	...	1	Fatal: Addison's disease.
...	1	...	...	...	...	...	...	...	...	1	...	...	
4	6	2	8	4	...	3	...	...	9	16	2	...	Readmissions 2.
...	1	...	...	...	...	...	...	...	1	...	...	...	
...	1	3	1	...	...	...	...	...	...	5	...	...	Double 1. Syphilitic testis 1.
...	...	1	...	...	...	...	...	...	1	...	...	...	
...	...	...	2	...	...	...	...	...	1	1	...	...	
...	...	1	1	...	...	...	...	...	1	...	...	1	
...	2	1	...	...	...	...	...	...	...	2	1	...	
..	2	1	3	1	...	...	...	...	5	...	2	...	
2	...	1	...	...	...	...	...	...	...	1	2	...	

TABLE I.—*Abstract, showing Diseases, &c., in Classes,*

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1–4	Dys. 5–13	Wks 2–4	Mts 1–2	Mts. 2–6	Mts. 6–12	Chronic.	Not stated.
ARTICULAR SYSTEM—*continued.*																		
Knee (continued)—																		
Hysterical	...	3	...	...	...	2	1	...	...	...	...	...	...	...	2	...	1	...
Synovitis, chronic	4	3	...	1	3	2	1	...	...	...	...	3	1	...	3	...	...	...
Hydrarthrosis	1	...	...	...	...	1	...	...	..	...	...	...	...	...	...	1	...	...
Ankylosis	5	2	...	1	4	...	1	..	1	...	...	...	...	...	1	1	5	...
Adhesions in joint	7	1	...	...	1	3	2	2	...	...	...	...	...	1	1	3	3	...
Ankle—																		
Tuberculous arthritis	8	5	2	2	5	2	2	...	...	...	...	...	...	1	5	1	6	...
Gummatous arthritis	...	2	...	...	...	...	2	...	...	...	...	...	...	...	...	2	...	...
Gonorrhœal arthritis	...	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...
Synovitis	1	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...
Adhesions in joint	2	1	...	...	1	2	...	...	...	...	...	...	...	1	2	...	...	...
Tarsus—																		
Tuberculous arthritis	3	3	2	1	...	1	1	...	...	1	..	...	...	2	1	1	2	...
Suppurative arthritis	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...
Metatarso-phalangeal joints—																		
Tuberculous arthritis	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Syphilitic arthritis	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Septic arthritis	1	1	...	...	...	1	...	...	1	...	...	...	...	1	1	...	...	...
AUDITORY SYSTEM.																		
Otitis externa	...	1	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Myringitis acuta	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...
Cerumen	...	1	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...
Earache	...	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...
Opaque membrane	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Ménière's disease	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...
Otitis media	1	7	1	...	3	4	...	...	...	...	...	2	...	1	1	1	3	...
Do. and mastoid caries	16	18	9	10	8	4	1	1	1	...	...	3	8	3	2	1	15	1
Do. and thrombosis of lateral sinus	3	1	...	1	2	...	1	...	...	...	...	...	...	1	2	...	1	...
Do. and cerebellar abscess	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
DISEASES OF SPINE.																		
Cervical caries	1	1	1	...	1	...	...	...	...	...	...	...	...	...	1	...	1	...
Cervico-dorsal caries	1	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Dorsal caries	13	4	1	6	6	3	1	...	...	...	...	...	...	1	1	2	12	1
Dorso-lumbar caries	4	3	...	1	2	3	1	...	...	...	...	...	...	2	1	...	4	..
Lumbar caries	6	2	...	5	3	...	...	...	...	...	...	...	2	...	3	1	1	...

according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
...	1	2	...	...	...	...	...	...	1	1	1	...	
...	4	3	...	...	...	...	...	...	5	2	...	...	Traumatic origin in 3; cause unknown 3.
...	...	...	1	...	...	...	...	...	1	...	...	...	Aspiration.
1	2	3	1	...	...	...	...	...	3	3	1	...	Erysipelas 1.
...	1	4	2	1	...	...	...	...	4	2	2	...	
...	1	1	6	2	3	...	...	...	4	9	...	...	
...	...	1	...	1	...	...	...	...	1	1	...	...	Same case. Arthrectomy and Pot. Iod.
...	...	1	...	...	...	...	...	...	...	1	..	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	
1	1	1	...	...	...	...	...	...	2	1	...	...	
...	...	3	2	1	...	...	...	...	2	4	...	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	Traumatic. Incised and scraped.
...	...	1	...	...	...	...	...	...	...	1	...	...	Scraped.
...	...	1	...	...	...	...	...	...	...	1	...	...	Scraped. Pot. Iod.
...	1	1	...	...	...	...	...	...	2	...	...	...	Amputation 2.
...	1	...	...	...	...	...	...	...	1	...	...	...	
1	...	...	...	...	...	...	...	...	1	...	...	...	Incised.
...	1	...	...	...	...	...	...	...	1	...	...	...	
...	1	...	...	...	...	...	...	...	...	...	1	...	
...	1	...	...	...	...	...	...	...	...	...	1	...	
...	1	...	...	...	...	...	...	...	...	...	1	...	
3	4	...	1	...	...	...	...	...	3	4	...	1	? Cerebral abscess 1. No P.M. Previous mastoidectomy.
1	3	14	14	2	...	...	...	...	23	7	...	4	Extradural abscess 1; septic meningitis 3.
...	2	1	...	...	1	...	...	...	1	...	...	3	Internal jugular vein ligatured 4. Fatal: septic meningitis 3. No cause 1.
...	...	...	...	1	...	...	...	...	1	...	...	...	Suppuration around sinus; sinus free. Jugular vein tied 1.
...	...	1	1	...	...	...	...	...	...	2	...	...	Cervical abscess 1.
...	...	1	...	...	...	...	...	...	...	1	...	...	
3	2	2	6	3	1	...	...	...	15	1	1		Dorsal abscess 2, lumbar abscess 2, psoas abscess 2, iliac abscess 4, sacral abscess 1, gluteal abscess 1. Fatal case: laminectomy, hypostatic pneumonia.
...	1	1	2	3	...	1	...	...	...	7	...	...	Abscess: lumbar 1, iliac 2, double psoas 1.
1	2	...	1	2	...	2	...	...	...	7	...	1	Fatal case: phthisis, ulceration of colon. Abscess: lumbar 2, psoas 1. Readmissions 2.

TABLE I.—*Abstract, showing Diseases, &c., in Classes,*

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic.	Not stated.
DISEASES OF SPINE—*continued.*																		
Sacral caries	2	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	2	...
Spondylitis deformans	2	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2	...	...
Lateral curvature	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Hypnotic curvature	1	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Hysterical spine	1	2	...	...	2	1	...	...	...	...	...	...	...	...	...	1	2	...
Coccydynia	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...
BURSITIS.																		
Acute	10	11	1	2	6	5	4	3	...	...	1	16	3	1	...	...	...	...
Tuberculous	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
Chronic enlargement	5	15	1	...	4	9	4	1	1	...	1	1	2	3	3	1	8	...
DISEASES OF TENDON SHEATHS.																		
Ganglion	...	6	...	...	2	4	...	...	...	...	...	...	...	1	...	...	5	...
Tuberculous teno-synovitis	3	...	1	2	...	...	...	...	...	...	...	1	...	...	1	...	1	...
Suppurative teno-synovitis	...	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...
Simple teno-synovitis	1	1	...	...	...	1	...	1	...	...	1	...	...	1	...	...	...	...
DEFORMITIES.																		
Torticollis	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Genu valgum	12	3	1	5	8	1	...	...	...	...	...	...	...	...	...	1	11	3
Talipes equino-varus	11	15	14	9	3	...	...	...	...	...	...	...	...	...	4	...	22	...
„ valgus	...	2	...	1	1	...	...	...	...	...	...	...	...	...	...	...	2	...
„ varus	1	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	2	...
„ calcaneo-valgus	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
„ equinus	4	4	1	2	3	...	1	1	...	...	...	...	...	...	3	...	5	...
Pes cavus	1	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	2	...
Pes planus	4	1	...	...	5	...	...	...	...	...	...	...	...	...	...	...	5	...
Hallux valgus	7	2	...	...	...	6	1	...	2	...	...	...	...	...	1	...	8	...
„ flexus	1	1	...	...	2	...	...	...	...	...	...	...	...	...	...	1	...	...
Hammer-toe	10	4	...	...	8	5	1	...	...	...	...	...	...	...	1	...	13	...
Pathological dislocations	1	3	...	...	1	...	2	...	1	...	...	...	...	...	...	...	4	...
Bowed tibia	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Multiple rachitic deformities	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Vicious union	3	...	...	...	1	...	...	2	...	...	...	...	...	...	2	1	...	...
Dupuytren's contraction	2	1	...	...	...	2	...	1	...	...	...	...	...	...	...	...	3	...
Ingrowing toe-nail	2	2	...	...	1	2	...	...	1	...	...	...	...	...	2	1	1	...
Deviation of nasal septum	2	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	2	...

according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
...	...	...	1	1	...	...	...	...	...	1	...	1	Fatal case: shock after operation.
...	...	...	1	1	...	...	...	...	...	2	...	...	Same case.
...	...	1	...	...	...	...	...	...	...	...	1	...	
...	...	1	...	...	...	...	...	...	...	1	...	...	Rachitic.
...	...	2	...	1	...	...	...	...	2	1	...	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	
1	9	10	1	...	...	...	...	...	21	...	...	...	Prepatellar 20, great toe 1.
...	...	1	...	...	...	...	...	...	1	...	...	...	Thigh.
1	5	10	4	...	...	...	...	...	19	...	1	...	Prepatellar 14, ligamentum patellæ 1, semimembranosus 2, sartorial 1, popliteal 1, metatarsal 1.
2	3	1	...	...	...	...	...	...	4	2	...	...	Wrist 5, ankle 1.
...	1	...	2	...	...	...	...	...	...	3	...	...	Ankle 2, wrist 1.
...	...	1	...	...	...	...	...	...	1	...	...	...	Post-rheumatic.
1	1	...	...	...	...	...	...	...	2	...	...	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	
...	2	1	5	7	...	...	...	...	12	3	...	...	Double 7. Old case 1.
5	5	7	4	3	...	...	...	...	21	3	...	2	Fatal cases: collapse of lung 2. Readmissions 3. Double 4. Old cases 4.
...	...	1	...	1	...	...	...	...	1	1	...	...	
...	1	...	...	1	...	...	...	...	1	1	...	...	
...	1	...	...	...	...	...	...	...	...	...	1	...	
1	2	3	2	...	...	...	...	...	2	6	...	...	
1	...	1	...	...	...	...	...	...	...	2	...	...	Double varicocele 1.
1	2	2	...	...	...	...	...	...	...	5	...	...	Double 4. Readmissions 2.
3	2	1	3	...	...	...	...	...	4	3	2	...	Double 6. Readmissions 3.
...	...	2	...	...	...	...	...	...	1	1	...	...	
...	10	2	2	...	...	...	...	...	13	...	1	...	
...	...	2	...	...	1	...	1	...	...	4	...	...	Tibia 1, femur 3. Readmission 1.
...	...	...	1	...	...	...	...	...	...	...	1	...	Phthisis.
...	...	1	...	...	...	...	...	...	...	1	...	...	
...	1	2	...	...	...	...	...	...	...	3	...	...	
...	1	2	...	...	...	...	...	...	1	...	2	...	
1	1	2	...	...	...	...	...	...	4	...	...	...	
...	1	1	...	...	...	...	...	...	1	...	1	...	

TABLE I.—*Abstract, showing Diseases, &c., in Classes,*

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic.	Not stated.
DEFORMITIES—*continued.*																		
Cicatricial contraction—																		
Face	3	4	3	...	1	...	...	2	...	...	...	...	...	...	3	...	3	...
Fingers	6	4	1	1	3	1	1	2	...	...	...	...	...	...	5	...	3	1
Elbow	1	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...
Knee	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Displaced toes	1	2	...	...	3	...	...	...	...	...	...	...	...	...	...	...	3	...
Old dislocation of elbow	2	1	...	...	...	1	...	1	1	...	...	...	...	1	1	...	1	...
Old subcoracoid dislocation	1	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...
Flexion at hip	...	2	...	...	1	...	1	...	...	...	...	...	...	...	...	...	1	1
Divided tendons of hand	2	3	...	...	1	3	1	...	...	...	1	...	...	3	1	...	...	...
Infantile paralysis of leg	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Strumous lip	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Ununited fract. of tibia	4	...	...	...	...	1	1	1	1	...	...	...	...	1	3	...	...	...
„ „ humerus	1	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...
Contracted orifice of lumbar colotomy	...	1	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...
MALFORMATIONS.																		
Single harelip	1	3	4	...	...	...	...	...	...	...	...	...	...	2	...	2	...	...
Do. and cleft palate	1	8	9	...	...	...	...	...	...	...	...	...	...	...	7	2	...	...
Double harelip and cleft palate	2	...	2	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...
Cleft palate	3	5	5	1	1	1	...	...	...	...	...	...	...	...	1	...	7	...
Prominent septum nasi	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...
Supernumerary auricle	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Branchial fistula	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Congenital absence of radii	1	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Congenital absence of tibia	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Congenital Dupuytren	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...
Dichotomy of phalanx	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Spina bifida	2	2	4	...	...	...	...	...	...	...	2	...	...	1	...	1	...	...
Epispadias	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...
Extroversion of bladder	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...
Atresia ani	...	2	2	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...
„ recti	2	...	2	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...
Recto-vaginal fistula	...	1	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Double congenital dislocation of hip	1	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	2	...
Congenital deformity of foot	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...

according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
1	1	2	1	1	...	1	...	..	1	6	...	...	Readmissions 2.
1	3	4	...	1	...	...	...	...	9	1	...	...	
...	...	...	1	...	...	...	...	...	...	1	...	...	
...	...	...	...	1	...	...	...	...	...	1	...	...	
...	1	2	...	...	...	...	...	...	3	...	...	...	
...	1	1	...	...	1	...	...	...	...	3	...	...	
...	1	...	...	...	...	...	...	...	...	1	...	...	
...	...	...	1	...	...	...	1	...	...	2	...	...	
1	1	3	...	...	...	...	...	...	2	3	...	...	
...	...	...	1	...	...	...	...	...	...	1	...	...	
...	...	...	1	...	...	..	...	...	...	1	...	...	
...	1	2	1	...	...	...	...	...	2	2	...	...	
...	...	1	...	...	...	...	...	...	...	1	...	...	
...	...	...	...	1	...	...	...	...	...	1	...	...	
...	...	3	...	1	...	...	...	...	3	...	...	1	Fatal case: collapse of lung. Left 3.
1	...	4	4	...	...	...	...	...	4	...	4	1	Fatal case: bronchitis. Left 6.
...	1	...	1	...	...	...	...	...	...	...	1	1	
...	2	4	2	...	...	...	...	...	4	...	3	1	Fatal case: marasmus.
...	...	...	...	1	...	...	...	...	1	...	...	...	
1	...	...	...	...	...	...	...	...	1	...	...	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	
...	...	...	1	...	...	...	...	...	...	...	...	1	Collapse of lung.
...	1	...	...	...	....	...	...	...	...	...	1	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	
2	...	2	...	...	...	...	...	...	...	...	1	3	Fatal cases: collapse of lung 1, nil 2.
...	...	...	...	...	...	1	...	...	...	1	...	...	
...	...	...	...	1	...	1	...	...	...	2	...	...	Same case.
...	1	1	...	...	...	...	...	...	1	...	...	1	Fatal case: broncho-pneumonia.
2	...	...	...	...	...	...	...	...	1	...	...	1	Fatal case: organs healthy.
...	...	1	...	...	...	...	...	...	...	...	...	1	Fatal case: diarrhœa.
...	...	1	1	...	...	...	...	...	...	1	1	.	
...	...	...	1	...	...	...	...	...	1	...	...	...	

TABLE I.—*Abstract, showing Diseases, &c., in Classes,*

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic.	Not stated.
DISEASES OF SKIN AND SUBCUTANEOUS TISSUES.																		
Sinus—																		
Elbow	2	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1
Thorax	1	1	1	...	...	1	...	...	...	...	...	...	...	...	1	...	...	1
Loin	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...
Abdomen	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Groin	2	1	1	...	...	...	1	1	...	...	...	...	...	1	1	...	1	...
Hip	4	4	...	2	4	2	...	...	...	...	...	...	1	...	1	...	6	...
Thigh	2	1	...	1	1	1	...	...	...	...	...	...	...	1	...	...	2	...
Knee	...	5	...	2	2	...	1	...	...	...	...	...	...	...	...	1	4	...
Ankle	2	1	...	...	3	...	...	...	...	...	...	...	...	1	1	...	1	...
Stump	3	...	...	1	...	1	...	...	...	1	...	...	...	...	2	...	1	...
Abscess—																		
Face and scalp	...	4	1	...	2	1	...	...	...	...	1	...	1	...	...	...	...	2
Neck	18	18	10	4	7	6	5	3	...	1	5	13	2	8	...	...	3	5
Alveolar	4	10	...	...	6	4	2	1	1	...	2	3	4	5	...	...	...	...
Breast	...	4	...	...	...	3	1	...	...	...	...	...	1	2	1	...	...	...
Abdominal wall	4	...	2	...	...	...	2	...	...	...	1	1	2	...	...	...	...	...
Back	1	1	1	1	...	...	...	...	...	...	...	1	...	...	1	...	...	...
Iliac	1	2	2	1	...	...	...	...	...	...	...	...	3	...	...	...	...	...
Psoas	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Scrotum	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Labial	...	2	...	...	...	1	1	...	...	...	...	1	1	...	...	...	...	...
Ischio-rectal	7	...	...	...	...	6	1	...	...	...	...	3	2	...	1	...	1	...
Urethral	7	...	...	...	...	2	3	1	1	...	...	2	2	2	...	...	...	1
Axillary	4	4	2	...	...	...	4	1	...	1	...	1	3	2	1	...	...	1
Upper extremity	3	4	2	...	3	1	...	1	...	...	1	3	2	...	...	...	...	1
Groin	7	3	3	1	4	...	2	...	...	...	4	1	3	1	...	...	1	...
Gluteal	4	...	3	1	...	...	...	...	...	...	..	2	2	...	...	...	...	...
Thigh	8	5	3	...	5	1	1	2	1	...	...	2	3	3	2	...	3	...
Popliteal	4	2	3	...	1	...	1	...	1	...	2	...	1	3	...	...	...	...
Leg	10	1	1	3	3	...	2	2	...	...	1	3	3	3	...	...	...	1
Retro-peritoneal	1	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...
Stump	...	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...
Pharyngeal	1	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...
Cellulitis—																		
Face and neck	3	...	1	...	...	...	1	...	...	1	1	1	1	...	...	...	...	...
Upper extremity	30	9	...	...	5	7	9	10	4	4	7	18	4	3	1	...	...	6
Ischial	1	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...
Lower extremity	21	9	1	2	8	5	4	4	4	2	10	9	2	3	2	...	...	4
Ulcers—																		
Leg	13	13	3	...	1	5	4	7	5	1	...	3	3	2	2	2	14	...
Buttock	1	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Anus	1	1	...	...	...	...	1	1	...	...	...	...	...	1	1	...	...	...

according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
1	1	...	...	...	...	...	...	...	1	1	...	...	
...	1	1	...	...	...	...	...	...	...	2	...	...	
...	1	...	...	...	...	...	...	...	...	...	1	...	
...	...	1	...	...	...	...	...	...	...	1	...	...	
...	3	...	...	...	...	...	...	...	1	1	1	...	
2	1	4	1	...	...	...	...	...	2	4	2	...	
...	1	1	1	...	...	...	...	...	1	2	...	...	
...	...	1	3	1	...	...	...	...	...	5	...	...	Erysipelas 1.
1	1	...	1	...	...	...	...	...	2	1	...	...	
...	1	1	1	...	...	...	...	...	1	1	1	...	
...	2	2	...	...	...	...	...	...	4	...	...	...	
2	27	6	1	...	...	...	...	...	36	...	...	...	
2	11	...	1	...	...	...	..	...	14	...	...	...	
...	2	1	1	...	...	...	...	...	4	...	...	..	
...	1	2	...	1	...	...	...	...	3	1	...	...	
...	1	...	...	...	...	...	...	...	2	...	...	...	Cause undetermined in both.
...	...	1	1	1	...	...	...	...	2	1	...	...	Cause undetermined in all.
...	...	...	...	1	...	...	...	...	...	1	...	...	Cause undetermined.
...	1	...	...	...	...	...	...	...	1	...	...	...	
...	2	...	...	...	...	...	...	...	2	...	...	...	
...	3	2	1	1	...	...	...	...	6	1	...	...	Sinus in groin communicating 1.
...	2	3	2	...	...	...	...	...	7	...	...	...	
1	2	4	1	...	...	...	...	...	6	1	...	1	Fatal case: large abscess; no P.M.
1	2	4	1	...	...	...	...	...	6	...	1	...	
...	3	4	3	...	...	...	...	...	9	1	...	...	
...	2	1	1	...	...	...	...	...	3	...	...	1	Fatal case: sloughing abscess; organs normal.
1	4	3	3	1	1	...	...	...	7	6	...	...	
...	3	3	...	...	...	...	...	...	6	...	...	...	
1	5	5	...	...	...	...	...	...	11	...	...	...	
...	...	...	...	1	...	...	...	...	1	...	...	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	
...	1	...	...	...	...	...	...	...	...	1	...	...	
1	1	1	...	...	...	...	...	...	3	...	...	...	
1	12	15	9	2	...	...	...	...	35	1	...	3	Fatal cases: pyæmia 1, chloroform narcosis 1, [diabetes 1.
...	...	...	...	1	...	...	...	...	1	...	...	...	
2	14	8	5	1	...	...	...	...	28	...	...	2	Fatal cases: pneumonia 1, erysipelas 1.
3	5	7	8	3	...	...	...	...	18	8	...	...	Readmission 1. Tuberculous 1, gangrenous 1, varicose 6, scar ulcer 1, circular 1.
...	...	1	...	...	...	...	...	...	...	...	...	1	Sloughing ulcer; marasmus; no P.M.
...	1	1	...	...	...	...	...	...	2	...	...	...	

TABLE I.—*Abstract, showing Diseases, &c., in Classes,*

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic	Not stated.
DISEASES OF SKIN AND SUBCUTANEOUS TISSUES —*continued.*																		
Ulcers (continued)—																		
Cornea	...	1	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Stump	3	...	...	...	...	2	...	1	...	...	...	...	...	1	2	...	...	...
Lupus	3	12	...	...	5	9	...	1	...	...	...	...	...	...	1	...	14	...
Tuberculosis of skin	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	2	...
Scrofuloderma	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Eczema	1	7	...	1	1	...	1	...	4	1	...	3	1	1	...	...	3	...
Carbuncle	2	...	...	...	...	...	...	1	1	...	...	2	...	...	...	...	...	...
Dermatitis herpetiformis	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...
„ exfoliativa	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...
Scabies	...	1	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
MEDICAL.																		
Acute pneumonia	2	...	..	1	...	...	...	1	...	...	2	...	...	...	...	...	...	...
Broncho-pneumonia	1	1	2	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...
Rheumatism	1	1	...	1	...	...	1	...	...	...	1	1	...	...	...	...	...	...
Gout	2	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	2	...
Diarrhœa	...	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...
Constipation	1	1	...	...	...	...	1	...	...	1	...	...	...	...	1	1	...	...
Cirrhosis	1	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...
Acute atrophy of liver	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...
Leucocythæmia	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Gastric ulcer	...	1	...	...	...	1	...	...	...	...	1	...	...	...	1	...	...	...
Purpura	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Delusions	...	1	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...
Hysteria	5	2	...	1	...	3	3	...	...	...	...	2	...	...	1	1	2	1
Tetanic spasms	1	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...
Writer's cramp	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
MISCELLANEOUS.																		
Pregnancy	...	1	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...
Prolapse of bowel	1	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...
Admitted for surgical instrument	3	...	...	...	1	...	1	1	...	...	...	...	1	...	1	1	...	...
Admitted for inspection	1	4	...	...	1	2	...	1	1	...	...	1	...	2	...	1	1	...
Malingering	5	...	...	...	...	2	1	2	...	...	...	...	1	3	...	...	...	1
Removal of wire from tibia	1	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...
„ ivory peg	1	1	...	...	1	1	...	...	...	...	...	...	...	...	1	...	1	...
For feeding after gastrostomy	1	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
Trivial	8	1	4	...	1	3	...	1	...	...	7	...	2	...	...	...	...	...
Total	1381	860																

according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
...	...	...	1	...	...	...	...	...	1	...	...	...	
1	1	1	...	...	...	...	...	...	1	1	1	...	
6	3		3	...	...	...	...	...	2	10	3	...	Readmissions 5.
...	...	1	1	...	...	...	...	...	2	...	...	...	
...	...	...	1	...	...	...	...	...	...	1	...	...	
...	3	3	2	...	...	...	...	...	8	...	...	...	Readmissions 2.
...	...	...	2	...	...	...	...	...	2	...	...	...	
...	...	...	1	...	...	...	...	...	1	...	...	...	
...	...	...	...	1	...	...	...	...	...	1	...	...	
...	...	...	1	...	...	...	...	...	1	...	...	...	
2	...	...	...	...	...	...	...	...	...	...	1	1	Transferred to Medical 1.
2	...	...	...	...	...	...	...	...	...	...	...	2	
...	1	1	...	...	...	...	...	...	2	...	...	...	
...	1	1	...	...	...	...	...	...	...	2	...	...	
1	...	...	...	...	...	...	...	...	1	...	...	...	
...	2	...	...	...	...	...	...	...	2	...	...	...	
...	1	...	...	...	...	...	...	...	...	...	...	1	Cirrhotic coma.
...	...	1	...	...	...	...	...	...	...	...	1	...	Transferred to Medical.
1	...	...	...	...	...	...	...	...	...	...	1	...	Transferred to Medical.
...	...	...	...	1	...	...	...	...	...	...	1	...	Transferred to Medical.
...	1	...	...	...	...	...	...	...	...	...	...	1	Cerebral hæmorrhage.
1	...	...	...	...	...	...	...	...	...	...	1	...	
2	3	2	...	...	...	...	...	...	4	...	3	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	
...	...	1	...	...	...	...	...	...	...	1	...	...	
1	...	...	...	...	...	...	...	...	...	...	1	...	
1	...	...	...	...	...	...	...	...	1	...	...	...	
2	...	1	...	...	...	...	...	...	...	3	...	...	
4	1	...	...	...	...	...	...	...	...	3	2	...	
3	...	1	1	...	...	...	...	...	2	...	3	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	
1	1	...	...	...	...	...	...	...	2	...	...	...	
...	...	...	...	...	...	...	...	...	...	1	...	...	
4	3	1	1	...	...	...	...	...	6	1	2	...	
									1413	523	192	113	

TABLE II.—*Abstract showing Injuries, &c., in*

INJURIES.	Sex.		Age.								Duration before admission.					
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Hrs. 1-6	Hrs. 7-12	Hrs. 13-24	Dys. 1-3	Dys. 3-6	Dys. +6
GENERAL INJURIES.																
Burns	32	35	36	10	7	5	2	2	3	2	61	...	2	...	2	2
Scalds	23	23	36	8	1	1	...	...	...	...	45	...	...	...	...	1
LOCAL INJURIES.																
Injuries of head and face—																
Scalp wounds	38	12	5	6	8	5	5	8	6	7	48	...	...	1	...	1
Hæmatoma of scalp	...	1	...	...	...	...	1	...	...	...	1	...	...	...	...	...
Wounds of face	3	1	...	...	2	1	...	...	...	1	4	...	...	...	...	...
Wounds of palate	1	2	1	2	...	...	...	...	...	...	3	...	...	. .	...	...
Punctured wound of orbit	1	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...
Hæmatoma of cheek	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...
Concussion	80	19	17	20	19	17	17	7	2	...	96	...	...	1	...	2
Fractures of vault of skull—																
Simple	3	1	1	1	...	...	...	1	...	1	4	...	...	...	...	...
Compound	13	6	1	...	4	2	6	1	3	2	17	...	...	1	...	1
Simple depressed	1	1	1	1	...	...	...	...	...	...	2	...	...	...	...	...
Compound depressed	3	...	...	...	1	...	...	1	...	1	3	...	...	...	...	...
Fractures of base	13	1	2	1	1	3	2	4	1	...	10	...	1	1	1	1
Fractures of base and vertex																
Simple depressed	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...
Compound	3	...	...	...	1	...	...	1	1	...	2	...	...	...	...	1
Compound depressed	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
Fractures of face bones—																
Compound of zygoma	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...
Fracture of inferior maxilla	6	2	...	1	4	1	2	...	...	...	7	...	...	1	...	...
Fracture of nasal bone	3	...	...	...	...	...	1	1	...	1	3	...	...	...	...	...
Compound of superior maxilla	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...
Injuries of neck—																
Bullet wound	...	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...
Incised wounds	10	1	...	...	1	3	2	...	...	5	11	...	...	...	...	...
Injuries of thorax—																
Contusions	5	2	...	...	2	1	1	1	1	1	6	...	1	...	...	...
Punctured wound	2	...	...	...	...	1	1	...	...	...	2	...	...	...	...	...
Bullet wound	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...

Classes, according to authorised Nomenclature.

Duration of residence.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
16	15	18	9	9	...	...	...	...	45	3	...	19	Erysipelas 1; electric burn 1.
11	13	16	5	1	...	...	...	...	36	...	...	10	
18	23	6	3	...	...	...	...	...	50	...	...	...	Saline infusion for loss of blood 1. Erysipelas 1. Transferred to Medical side 1.
1	...	...	...	...	...	...	...	...	1	...	...	...	
3	...	1	...	...	...	...	...	...	4	...	...	...	
1	2	...	...	...	...	...	...	...	3	...	...	...	
1	...	...	...	...	...	...	...	...	1	...	...	...	Eye intact.
...	1	...	...	...	...	...	...	...	1	...	...	...	
56	36	7	...	...	...	...	...	...	96	...	1	2	Imbecile 1; epileptic 1. Discharged to Infirmary 1.
3	...	1	...	...	...	...	...	...	1	...	...	3	Ruptured spleen 1.
7	9	2	1	...	...	...	...	...	13	...	...	6	Erysipelas 1; scald 1, boiler explosion.
2	...	...	...	...	...	...	...	...	1	...	...	1	Fractured femur 1.
...	1	2	...	...	..	...	...	...	3	...	...	...	
...	4	10	...	...	...	...	...	...	14	...	...	...	For one doubtful case see "Fractures of femur."
1	...	...	...	...	...	...	...	...	...	...	...	1	
2	1	...	...	...	...	...	...	...	...	...	...	3	Bullet wound 1.
...	...	1	...	...	...	...	...	...	...	...	...	1	
...	...	...	1	...	...	...	...	...	1	...	...	...	Bullet wound.
...	8	...	...	...	...	...	...	...	8	...	...	...	Bullet wound 1; fracture of clavicle and ribs 1. See also "Fractures of femur," and "Skull," and "Ribs."
...	3	...	...	...	...	...	...	...	3	...	...	...	Fractured ribs 2. See also "Compound comminuted fracture of ulna."
1	...	...	...	...	...	...	...	...	...	1	...	...	Bullet wound; attempted extraction.
...	1	...	...	...	...	...	...	...	1	...	...	...	
3	8	...	...	...	...	...	...	...	8	...	...	3	Incised wounds of thorax 2.
2	3	1	1	...	...	...	...	...	7	...	...	...	
1	1	...	...	...	...	...	...	...	2	...	...	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	Did not open pleura.

TABLE II.—*Abstract showing Injuries, &c., in*

INJURIES.	Sex.		Age.								Duration before admission.					
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Hrs. 1-6	Hrs. 7-12	Hrs. 13-24	Dys. 1-3	Dys. 3-6	Dys. +6
LOCAL INJURIES—*continued.*																
Injuries of thorax (continued)—																
Fractured ribs	24	3	...	2	3	...	2	6	7	7	24	1	2	...	...	...
Injuries of back—																
Contusions	13	1	...	...	...	2	4	6	2	...	13	...	1	...	...	...
Sprains	3	2	...	...	2	1	...	...	2	...	2	...	...	2	1	...
Injuries of spine—																
Concussion	3	...	...	...	...	1	1	...	1	...	3	...	...	...	...	...
Fractures	6	1	...	...	1	2	3	1	...	...	4	...	1	...	...	2
Injuries of abdomen—																
Contusion	13	3	1	6	5	3	1	...	...	...	14	...	2	...	...	...
Bullet wound of abdominal wall	...	1	...	...	...	...	1	...	...	...	1	...	...	...	...	...
Rupture of liver	2	...	1	...	...	1	...	...	...	...	2	...	...	...	...	...
„ of kidney	2	...	...	...	1	1	...	...	...	...	1	...	1	...	...	...
„ of spleen	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
„ of bladder	1	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...
„ of sigmoid flexure	1	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...
Penetrating wound of small intestine	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...
Injuries of pelvis, &c.—																
Ruptured perinæum	...	1	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Hæmatoma of scrotum	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...
Wound of scrotum	3	...	...	...	2	1	...	...	...	...	3	...	...	...	...	...
Hæmatoma of vulva	...	1	...	...	...	...	1	...	...	...	1	...	...	...	...	...
Wound of vulva	...	3	1	...	1	...	1	...	...	...	3	...	...	...	...	...
Lacerated wound of vagina	...	1	...	...	...	...	1	...	...	...	1	...	...	...	...	...
Contusion of perinæum	2	...	...	...	1	...	...	1	...	...	1	...	...	1	...	...
Fracture of pelvis	3	...	...	1	...	2	...	...	...	...	3	...	...	...	...	...
„ of iliac crest	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...
Compound fracture of iliac crest	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...

Classes, according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
6	14	4	2	...	...	...	...	...	22	...	...	5	Ruptured lung 5; dislocation of clavicle 1; fracture of clavicle 1; ruptured kidney 1; compound 1. See also "Fractured tibia and fibula," "Pelvis," "Femur," "Dislocation of humerus," "Fracture of nasal bones," "Inferior maxilla," "Rupture of liver and spleen."
8	3	3	...	...	...	...	...	...	14	...	...	...	
3	1	1	...	...	...	...	...	...	5	...	...	...	
1	1	...	...	...	1	...	...	...	2	1	...	...	
2	1	3	...	1	...	...	...	...	2	2	1	2	2 old cases.
9	5	2	...	...	...	...	...	...	15	...	...	1	See also "Fractured femur." Infusion 1.
...	1	...	...	...	...	...	...	...	1	...	...	...	
2	...	...	...	...	...	...	...	...	...	...	...	2	Fractured ribs 1.
...	2	...	...	...	...	...	...	...	2	...	...	...	See also "Fractured ribs" and "Ruptured spleen."
1	...	...	...	...	...	...	...	...	...	...	...	1	Rupture of pancreas and kidney; fracture of ribs. See also "Simple fractures of skull (vault)."
1	...	...	...	...	...	...	...	...	...	...	...	1	Intra-peritoneal. See also "Fractured pelvis."
1	...	...	...	...	...	...	...	...	...	...	...	1	
1	...	...	...	...	...	...	...	...	...	...	...	1	Penetrating wound through ischio-rectal fossa.
...	1	...	...	...	...	...	...	...	...	1	...	...	
1	...	...	...	...	...	...	...	...	1	...	...	...	
...	1	2	...	...	...	...	...	...	3	...	...	...	Testis exposed.
1	...	...	...	...	...	...	...	...	1	...	...	...	
...	2	1	...	...	...	...	...	...	3	...	...	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	In posterior cul-de-sac.
1	..	1	...	...	...	...	...	...	2	...	...	...	Dysuria and hæmaturia (? ruptured urethra 1).
3	...	...	...	...	...	...	...	...	...	...	...	3	Ruptured urethra 1; ruptured bladder 1.
...	...	1	...	...	...	...	...	...	1	...	...	...	
...	...	1	...	...	...	...	..	...	1	...	...	...	See also "Compound dislocation of hip."

Table II.—*Abstract showing Injuries, &c., in*

Injuries.	Sex.		Age.								Duration before admission.					
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Hrs. 1-6	Hrs. 7-12	Hrs. 13-24	Dys. 1-3	Dys. 3-6	Dys. +6
Local Injuries—*continued.*																
Injuries of upper extremity—																
Injury to brachial plexus	3	...	...	...	1	1	1	...	...	...	1	...	...	...	...	2
Contusion of shoulder	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
Wound of arm	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
Wounds of forearm involving nerves	3	2	...	...	2	1	...	1	1	...	4	1	...	...	...	...
„ of forearm	3	1	...	...	1	...	2	...	...	1	3	1	...	...	...	1
„ of hand	4	3	...	...	2	2	3	...	...	...	6	1	...	...	...	...
Dislocation of humerus	5	3	...	...	1	...	1	1	2	3	3	...	...	2	1	2
Do. of radius and ulna	3	...	...	...	...	1	1	1	...	...	2	...	...	..	1	...
Do. of radius	1	...	...	...	...	1	...	...	...	...	1	...	...		...	...
Fracture of clavicle	6	...	...	...	1	3	1	1	...	...	6	...	...	...	...	...
Do. of humerus	5	1	...	1	...	2	1	2	...	...	6	...	...	...	...	...
Comminuted fracture of humerus	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...
Fracture of humerus, compound	4	...	...	...	1	...	...	...	2	1	4	...	...	...	...	...
Separation of humoral epiphysis	3	...	2	1	...	...	...	...	...	...	3	...	...	...	...	...
Fracture of radius	1	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...
Do. of ulna	2	...	...	...	...	2	...	...	...	...	1	1	...	...	...	...
Do. do., compound	1	1	...	...	...	...	1	...	1	...	1	...	1	...	...	...
Do. do., comp. comminuted	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...
Do. radius and ulna	1	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...
Do. do., compound	2	...	...	...	...	2	...	...	...	...	2	...	...	...	...	...
Do. do., comp. comminuted	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...
Compound of hand	5	2	1	1	3	1	1	...	...	...	5	...	...	2	...	...
Injuries of lower extremity—																
Contusion of hip	4	...	...	...	2	...	...	1	...	1	4	...	...	...	...	...
Hæmatoma of thigh	1	...	...	...	...	...	1	...	...	...	0	...	...	...	...	1
Contusion of thigh	8	...	...	2	...	2	1	...	...	3	8	...	...	...	..	...
Hæmatoma of knee	1	1	...	...	...	1	1	...	...	...	2	...	...	...	...	...
Do. of foot	2	1	...	...	...	1	2	...	...	...	1	...	...	...	...	2

Classes, according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
...	...	1	2	...	...	...	...	...	...	2	1	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	Suture of triceps tendon 1.
1	2	1	1	...	...	...	...	...	2	3	...	...	
...	2	1	...	1	...	...	...	...	4	...	...	...	
...	2	4	...	1	...	...	...	...	7	...	...	...	Bullet wound 1.
3	4	1	...	...	...	...	...	...	7	1	0	...	Fracture of neck of humerus 1; paralysis of musculo-spiral and ulnar nerves 1.
1	2	...	...	...	...	...	...	...	2	1	...	...	Fracture of external condyle 1. Backwards 1; backwards and inwards 1; outwards 1.
1	...	...	...	...	...	...	...	...	...	1	...	...	Forwards; permanent reduction impossible.
...	3	2	1	...	...	...	...	...	6	...	...	...	See also "Fracture of radius and ulna." Concussion 2; scalp wounds 2. See also "Fracture of femur."
1	4	1	...	...	...	...	...	...	6	...	...	...	See also "Dislocation of radius and ulna," "Compound comminuted fracture of ulna," and "Fracture of femur."
...	1	...	...	...	...	...	...	...	1	...	...	...	
1	2	1	...	...	...	...	...	...	4	...	...	...	
...	1	2	...	...	...	...	...	...	3	...	...	...	Upper 1, lower 2; direct violence 2.
...	1	...	...	...	...	...	...	...	1	...	...	...	Lower third. Fractured ribs. See also "Ulna."
...	2	...	...	...	...	...	..	...	2	...	..	...	Upper third 1; concussion 1; scalp wounds 1; olecranon 1; wire radius 1; os magnum 1.
...	2	...	...	...	...	...	...	...	2	...	...	...	
...	...	...	1	...	...	..	..	...	1	...	...	...	Fracture of external condyle of humerus.
...	1	...	...	...	...	..	...	...	1	...	...	...	Fracture of clavicle.
1	...	1	...	...	...	...	...	...	2	...	...	...	Upper third 1, lower third 1. Rupture of deltoid 1. Direct violence 1.
...	...	1	...	...	...	...	...	...	1	...	...	...	Compound fracture of nasal bones; fracture of ribs. Lower third.
1	1	4	1	...	...	...	...	...	7	...	...	...	
2	2	...	...	...	...	..	...	...	4	...	...	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	Suppurating.
2	3	3	...	...	...	...	...	...	8	...	...	...	
...	...	1	1	...	...	...	...	...	2	...	...	...	
1	...	...	1	1	...	...	...	...	3	...	...	...	Suppurating ruptured internal lateral ligament 1; ruptured peroneus tertius 1.

TABLE II.—*Abstract showing Injuries, &c., in*

INJURIES.	Sex.		Age.								Duration before admission.					
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Hrs. 1-6	Hrs 7-12	Hrs. 13-24	Dys. 1-3	Dys. 3-6	Dys. +6
LOCAL INJURIES—*continued.*																
Injuries of lower extremity.																
Hæmatoma of buttock	3	3	...	...	1	1	1	3	...	...	6	...	...	...	...	...
Wounds of gluteal region	3	...	...	...	...	3	...	...	...	...	3	...	...	...	...	...
„ of thigh	5	...	1	1	1	2	...	...	...	...	5	...	...	...	...	...
Foreign body in thigh	2	1	...	1	...	1	...	1	...	...	3	...	...	...	...	...
Wounds over knee	1	2	...	1	1	1	...	...	...	...	3	...	...	...	...	...
„ of leg	5	1	...	2	...	1	1	1	1	...	5	...	1	...	...	...
„ of foot	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...
Traumatic synovitis	8	2	1	2	2	4	1	...	...	...	5	1	...	1	1	2
Ruptured internal lateral ligament	2	...	...	...	...	...	2	...	...	...	2	...	...	...	...	...
Penetrating wound of knee	3	2	1	...	...	2	1	1	...	...	5	...	...	...	...	...
Sprained ankle	5	2	...	...	...	4	1	2	...	...	3	...	...	2	...	2
Wounds of ankle-joint	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
Dislocations—																
Compound of hip	1	...	...	...	...	1	0	...	...	...	1	...	...	...	...	...
Foot	...	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...
Subastragaloid	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
Fractures—																
Shaft of femur	32	30	19	16	12	3	0	4	4	4	62	...	...	...	...	...
Do., comminuted	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
Do., comp. comminuted	...	1	...	...	...	...	...	1	...	...	1	...	...	...	...	...
Lower extremity	2	...	...	...	...	...	2	...	...	...	2	...	...	...	...	...
Separation of lower epiphysis	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Neck of femur	3	7	...	...	...	...	...	2	1	7	10	...	...	...	...	...
Patella	20	7	...	...	...	6	4	11	3	3	26	...	...	...	...	1
Tibia and fibula	84	28	1	8	6	20	23	29	17	8	111	...	1	...	...	...
Do., comminuted	1	1	...	...	...	...	2	...	...	...	2	...	...	...	...	...
Do., compound	10	8	1	2	4	1	3	3	3	1	17	...	...	...	...	1
Do., comp. comminuted	1	3	...	1	1	...	...	1	1	...	4	...	...	...	...	...
Tibia	20	8	...	4	11	4	5	1	2	1	27	...	...	...	...	1
Do., comminuted	3	...	...	1	...	2	...	...	...	...	3	...	...	...	...	...
Do., compound	3	...	...	...	...	2	...	...	1	...	3	...	...	...	...	...
Fibula	22	15	...	1	6	3	12	7	5	3	36	...	...	1	...	..

Classes, according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
3	3	...	...	...	...	...	...	...	6	...	...	...	
...	...	1	1	...	1	...	...	...	2	1	...	...	See also "Penetrating wounds of intestine."
1	1	2	...	...	1	...	...	...	4	...	...	1	
1	...	2	...	...	...	...	...	...	3	...	...	...	Needles 2. All extracted.
1	2	...	...	...	...	...	...	...	3	...	...	...	
...	2	1	3	...	...	...	...	...	5	1	...	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	
4	4	2	...	...	...	...	...	...	9	1	...	...	Displaced internal semilunar 1; ruptured internal lateral ligament 1.
1	...	1	...	...	...	...	...	...	1	1	...	...	
...	4	...	...	1	...	...	...	...	4	...	...	1	Fatal pyæmia. See Special Table.
3	3	1	...	...	...	...	...	...	7	...	...	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	Synovia escaped. Progress good.
...	0	...	...	1	...	...	...	...	1	...	...	...	Fracture of iliac crest 1. Pubic dislocation.
...	1	...	...	...	...	...	...	...	1	...	...	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	
1	13	24	19	5	...	...	...	...	56	3	...	3	Impacted 1.
...	...	...	1	...	...	...	...	...	1	...	...	...	
...	...	...	1	...	...	...	...	...	1	...	...	...	
...	...	...	2	...	...	...	...	...	2	...	...	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	Fractured radius 1. See also "Compound comminuted fracture of tibia and fibula."
...	...	4	4	2	...	...	...	...	5	5	...	...	Fractured patella 1.
...	7	13	6	1	...	...	...	...	24	2	1	...	Re-fracture 2.
9	60	32	9	2	...	...	...	...	109	..	...	3	Fracture of sternum; ribs and humerus.
...	2	...	...	...	...	...	...	...	2	...	...	...	Ruptured ligamentum patellæ 1.
...	3	5	5	5	...	...	...	...	17	...	...	1	Erysipelas 1; fractured ribs 1; dislocation of ankle 2.
1	...	2	1	...	...	...	...	...	3	...	...	1	Infusion 1; knee-joint opened 1; separation of femoral epiphysis 1.
8	12	7	1	...	...	...	...	...	27	1	...	...	Fractured clavicle 1.
1	1	1	...	...	...	...	...	...	3	...	...	...	
...	...	1	2	...	...	...	...	...	3	...	...	...	
9	22	6	...	...	...	...	...	...	37	...	...	...	

TABLE II.—*Abstract showing Injuries, &c., in*

INJURIES.	Sex.		Age.								Duration before admission.					
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Hrs. 1-6	Hrs. 7-12	Hrs. 13-24	Dys. 1-3	Dys. 3-6	Dys. +6
LOCAL INJURIES—*continued.*																
Fractures (continued)—																
Compound of foot . .	2	...	...	...	1	1	...	...	...	...	1	...	...	1	...	...
Compound comminuted of foot	2	1	...	1	...	...	2	...	...	...	1	...	...	1	...	1
Total injuries . . .	638	263														
Total diseases (from Table I)	1381	860														
	2019	1123														
Total	3142															

Classes, according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
...	1	...	1	...	...	...	...	...	2	...	...	...	
...	1	1	1	...	...	...	...	...	3	...	...	...	
									790	31	4	76	
									1413	523	192	113	
									2203	554	196	189	
									3142				

TABLE III.—

SURGICAL OPERATIONS.	Sex.		Age.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60
REMOVAL OF TUMOURS AND NEW GROWTHS.										
Amputation of breast	...	8	...	...	...	...	...	5	2	1
Do. do. with removal of glands	...	26	...	...	...	2	3	4	7	10
Recurrent carcinoma of breast	...	3	...	...	...	...	1	...	2	...
„ glands	...	1	...	...	...	...	...	...	1	...
Carcinoma of testis	1	...	...	...	...	1	...	...	...	...
„ „ recurrent	1	...	...	...	...	...	1	...	...	...
„ of superior maxilla	...	1	...	...	...	...	...	...	1	...
„ of rectum	1	2	...	...	...	...	1	1	1	...
„ of urethra	...	2	...	...	...	...	...	...	...	2
Epithelioma over mastoid	1	...	...	...	...	...	...	...	...	1
„ of cheek	2	1	...	...	...	...	...	...	2	1
„ of lip	9	1	...	...	...	...	...	1	3	6
„ of tongue	8	3	...	...	...	...	1	...	5	5
„ „ recurrent	2	...	...	...	...	...	...	1	1	...
„ of floor of mouth	2	1	...	...	...	...	...	1	1	1
„ „ recurrent	2	...	...	...	...	...	...	...	2	...
„ of cervical glands	5	...	...	...	...	...	...	1	2	2
„ of epulis	1	...	...	...	...	...	...	...	...	1
„ of penis	2	...	...	...	...	...	...	...	1	1
„ of urethra and vulva	...	1	...	...	...	...	...	...	...	1
„ of scrotum	...	1	...	...	...	...	...	..	1	...
„ of labium	...	2	...	...	...	...	...	...	1	1
„ of hand	1	...	...	...	...	...	...	...	...	1
Rodent ulcer	6	3	...	...	...	...	1	...	3	5
Sarcoma of femur	...	1	...	...	1	...	...	...	...	...
„ of fibula	...	1	...	...	...	1	...	...	...	...
„ of sacrum	...	1	...	...	...	...	...	...	1	...
„ of femur, secondary	1	...	...	...	...	...	...	...	1	...
„ of cæcum	1	...	...	...	1	...	...	...	...	...
„ of superior maxilla	...	1	...	...	...	...	...	...	1	...
„ of testis	1	...	...	...	...	...	1	...	...	...
„ of clitoris, melanotic	1	...	...	...	...	...	...	...	...	1
„ of glands of groin	1	...	...	...	...	...	1	...	...	...
„ of olecranon bursa	1	...	...	...	...	...	1	...	...	...
„ of intermuscular planes	...	1	...	...	...	1	...	...	...	...
„ of base of sebaceous horn	...	1	...	...	...	...	...	...	...	1
„ of popliteal space	...	1	...	...	1	...	...	...	...	...
„ of skin of leg	...	1	...	...	...	1	...	...	...	...

Surgical Operations.

Duration of residence after operation.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
...	2	5	1	...	...	...	...	...	8	...	...	...	Scirrhus 3; interstitial mastitis 5; partial 1.
...	2	20	4	...	...	...	...	...	25	...	...	1	Fatal case: scarlet fever, tubal nephritis. Papilloma 2, duct carcinoma 2.
...	...	1	2	...	...	...	...	...	3	...	...	...	
1	...	...	...	...	...	...	...	...	...	...	...	1	Thoracic duct cut.
...	...	...	1	...	...	...	...	...	1	...	...	...	
...	...	...	...	1	...	...	...	...	...	1	...	...	
...	...	...	1	...	...	...	...	...	...	...	...	1	
...	...	...	3	...	...	...	...	...	2	...	...	1	Peritoneum notched in 1. Fatal case: phthisis; operation result good.
...	...	...	2	...	...	...	...	...	...	2	...	...	
...	...	..	1	...	...	...	...	...	...	1	...	...	
...	1	1	1	...	...	...	...	..	3	...	...	...	
1	8	1	...	...	...	...	...	...	10	...	...	...	Epithelioma of penis 1.
1	8	1	...	1	...	...	...	..	11	...	...	...	Both linguals tied 1, one lingual tied 1.
...	1	1	...	...	...	...	...	...	...	2	...	...	
...	...	3	...	...	...	...	...	...	2	...	...	1	Fatal case: pneumonia. Jaw divided 1, portion of jaw removed 1.
...	...	1	1	...	...	...	...	...	...	2	...	...	Portion of jaw removed.
...	2	1	1	1	...	...	...	...	1	4	...	...	
...	1	...	...	...	...	...	...	...	...	1	...	...	
1	...	...	...	1	...	...	...	...	1	...	...	1	Fatal case: carcinoma of rectum and phthisis. Epithelioma of lip 1.
...	...	1	...	...	...	...	...	...	1	...	...	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	
...	1	1	...	...	...	...	...	...	2	...	...	...	
...	1	...	...	...	...	...	...	...	1	..	...	...	Dorsum of hand.
1	...	5	2	1	...	...	...	...	9	...	...	...	
1	...	...	...	...	...	...	...	...	...	...	...	1	Giant-celled. Amputation lower third of thigh; fatal shock.
...	...	1	...	...	...	...	...	...	1	...	...	...	Giant-celled; amputation lower third of thigh.
1	...	...	...	...	...	...	...	...	...	...	...	1	Paraplegia. No secondary growths.
...	...	...	...	...	...	1	...	...	...	1	...	...	Round-celled. Spontaneous fracture. Primary growth in ilium.
...	1	...	...	...	...	...	...	...	...	...	...	1	Round-celled. Intestinal anastomosis; fatal peritonitis.
...	...	1	...	...	...	...	...	...	...	1	...	...	Mixed-celled. Partial excision of jaw.
...	...	1	...	...	...	...	...	...	1	...	...	...	Adeno-sarcoma. Castration.
...	...	...	1	...	...	...	...	...	...	...	...	1	Removal; erysipelas.
...	...	1	...	...	...	...	...	...	1	...	...	...	Cylindroma; myxomatous degeneration.
...	...	1	...	...	...	...	...	...	1	...	...	...	Spindle-celled; amputation of arm.
...	...	1	...	...	...	...	...	...	1	...	...	...	Excision.
...	...	...	1	...	...	...	...	...	...	...	...	1	Round-celled; secondary growth in spleen and liver.
...	...	...	1	...	...	...	...	...	1	...	...	...	Fibrifying sarcoma.
...	1	...	...	...	...	...	...	...	1	...	...	...	Fibrifying sarcoma.

TABLE III.—*Surgical*

SURGICAL OPERATIONS.	Sex.		Age.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60
REMOVAL OF TUMOURS AND NEW GROWTHS —*continued.*										
Sarcoma of back, recurrent	2	...	...	...	...	...	2	...	....	...
„ of tonsil	...	1	...	...	1	...	...	...	...	...
Fibro-adenoma	...	7	...	...	1	5	...	...	1	...
Fibroma	...	2	...	...	..	1	...	1	...	...
Fibrous epulis	...	1	...	...	...	1	...	...	...	...
Lipoma	8	10	...	...	1	5	3	3	5	1
Enchondroma	1	...	...	...	1	...	...	...	...	...
Exostosis	6	2	...	...	7	...	1	...	...	...
Tuberculous granuloma	1	...	1	...	...	...	...	...	...	...
Adenoids	9	3	1	2	8	1	...	...	...	...
Tonsils	3	2	...	2	2	1	...	...	...	...
Nasal polypi	4	3	...	...	3	3	...	1	...	...
Papilloma	1	2	...	...	1	1	1	...	...	...
Nævus	1	9	6	2	2	...	...	...	...	...
Rectal polypi	1	4	...	...	1	1	1	1	...	1
Submaxillary tumour	...	1	...	...	...	...	...	1	...	...
Urethral caruncle	...	1	...	...	...	...	...	...	...	1
Adenoma of skin	...	1	...	...	...	1	...	...	...	...
Fibro-myoma of uterus	...	1	...	...	...	..	1	...	...	...
Kidney	...	1	...	...	...	...	...	...	1	...
Dermoid cyst of ovary	...	2	...	...	1	1	...	...	...	...
Ovarian cyst	...	8	...	...	2	1	...	3	1	1
„ „ suppurating	...	1	...	...	1	...	...	...	...	...
Parovarian cyst	...	1	...	...	...	...	1	...	...	...
Pancreatic cyst	...	1	...	...	...	...	1	...	...	...
Dermoid cyst	5	1	...	1	3	2	...	...	...	...
Multilocular cyst of neck	1	...	...	...	...	1	...	...	...	...
Ranula	...	2	...	...	2	...	...	...	...	...
Cyst in connection with tooth fang	...	2	...	...	...	...	2	...	...	...
Sebaceous cyst	4	2	...	...	1	1	2	...	1	1
Serous cyst over mastoid	1	...	...	1	...	...	...	...	...	...
Labial cyst	...	1	...	...	...	1	...	...	...	...
Morrant Baker cyst of calf	1	...	...	...	...	...	1	...	...	...
Cyst of breast	...	3	...	...	...	2	...	1	...	...
RESPIRATORY SYSTEM.										
Rhinitis	...	1	...	...	...	1	...	...	...	...
Drainage of antrum	1	4	...	...	...	3	2	...	...	...
Estlander	3	...	...	...	1	...	...	...	...	2
Drainage of empyema	1	...	...	...	...	...	...	1	...	...
Thyrotomy	1	...	...	...	...	...	...	1	...	...
Tracheotomy	5	3	2	...	2	..	2	...	2	...
Intubation	1	...	1	...	...	...	...	...	...	...

Operations—continued.

Duration of residence after operation.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
...	...	...	2	...	...	...	...	...	...	2	...	...	Fibrifying sarcoma. Same case.
...	...	1	...	...	...	...	...	...	...	...	1	...	Round-celled; tracheotomy.
...	2	4	1	...	...	...	...	...	7	...	..	...	All of breast.
...	2	...	...	...	...	...	...	...	2	...	...	...	Median nerve 1, extensor tendon 1.
1	...	...	...	...	...	...	...	...	1	...	...	...	
2	15	1	...	...	...	...	...	...	18	...	...	...	Pendulous in perinæum 1.
...	...	1	...	...	...	...	...	...	1	...	...	...	Metacarpus.
3	4	...	...	1	...	...	...	...	8	...	...	...	Neck of femur 1; remainder subungual.
...	...	..	1	...	...	...	...	...	1	...	...	...	Of spermatic cord.
8	4	...	...	...	...	...	...	...	12	...	...	...	
3	2	...	...	...	...	...	...	...	5	...	...	...	
2	3	2	...	...	...	...	...	...	7	...	...	...	Roux's operation.
...	2	1	...	...	...	...	...	...	3	...	...	...	Of neck 1, of vulva 2.
...	6	3	...	1	...	...	...	...	10	...	...	...	
...	4	...	1	...	...	...	...	...	5	...	...	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	
1	...	...	...	...	...	...	...	...	1	...	...	...	
...	...	...	1	...	...	...	...	...	1	...	...	...	
...	...	...	1	...	...	...	...	...	1	...	...	...	Nephrectomy for papilloma and hæmorrhage.
...	...	...	2	...	...	...	...	...	2	...	...	...	
1	1	2	...	4	...	...	...	...	5	1	...	2	Double 1. Fatal cases: peritonitis 1, hysterectomy 1.
...	...	...	...	1	...	...	...	...	...	1	...	...	Fæcal fistula.
...	...	...	1	...	...	...	...	...	1	...	...	...	Drainage.
...	...	...	1	...	...	...	...	...	1	...	...	...	Drainage of cyst after partial excision.
3	3	...	...	...	...	...	...	...	6	...	...	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	
2	..	...	...	...	...	...	...	...	...	2	...	...	Same case.
...	1	1	...	...	...	...	...	..	2	...	...	...	Canine 1, lateral incisor 1. Both in upper jaw.
1	5	...	...	...	...	...	...	...	6	...	...	...	
1	...	...	...	...	...	...	...	...	1	...	...	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	Tuberculous.
...	2	1	...	...	...	...	...	...	3	...	...	...	
...	1	...	...	...	...	...	...	...	...	1	...	...	Scraped.
...	4	...	1	...	...	...	...	...	...	5	...	...	
...	...	...	2	1	...	...	...	...	1	2	...	...	
...	..	...	...	1	...	...	...	...	...	1	...	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	Polypi; excision of vocal cord.
3	...	3	2	...	...	...	...	...	...	2	2	4	
...	...	...	1	...	...	...	...	...	...	...	...	1	Abscess at base of epiglottis; tracheotomy.

TABLE III.—*Surgica*

SURGICAL OPERATIONS.	Sex.		Age.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60
NERVOUS SYSTEM.										
Suture of nerves	3	4	...	...	3	3	...	1	...	...
Resection and suture of nerves	3	...	...	...	...	...	...	2	...	1
Laminectomy	2	...	...	...	...	...	2	...	...	...
Nerve stretching	1	...	...	...	...	...	...	...	...	1
Exploration of brachial plexus	2	...	...	...	1	1	...	...	...	...
VASCULAR SYSTEM.										
Ligation of femoral vein	...	1	...	...	...	...	1	...	...	...
„ of internal jugular vein	7	1	...	1	4	2	1	...	...	...
„ of external jugular vein	1	...	...	...	...	...	1	...	...	...
„ of superficial femoral artery	1	1	...	...	...	...	2	...	...	...
„ of internal iliac artery	1	...	...	...	...	...	...	1	...	...
Excision of ulnar aneurysm	1	...	...	...	1	...	...	...	...	...
„ of radial aneurysm	2	...	...	...	1	...	...	...	...	1
„ of varicose veins	45	22	...	...	13	39	7	5	3	...
„ of varicocele	32	...	...	...	17	15	...	...	...	...
Subcutaneous operation for varicocele	14	...	...	...	11	3	...	...	...	...
LYMPHATIC SYSTEM.										
Excision of tongue	...	1	...	...	1	...	...	...	...	...
„ of tuberculous glands	30	21	3	5	19	18	4	1	1	...
Scraping tuberculous glands	8	2	...	1	2	5	1	1	...	...
Excision of enlarged glands	2	2	1	...	2	1	...	...	...	...
THYROID.										
Partial excision	1	...	...	...	1	...	...	...	...	...
Excision of adenoma	...	5	...	...	...	3	1	...	1	...
„ of cyst	...	1	...	...	...	...	1	...	...	...
DIGESTIVE SYSTEM.										
Herniotomy—										
Inguinal	3	...	1	...	...	...	...	...	...	2
Femoral	...	4	...	...	...	...	...	1	1	2
Umbilical	...	3	...	...	...	...	...	1	2	...
Herniotomy and radical cure—										
Inguinal	29	1	4	...	2	8	3	3	5	5
Femoral	...	11	...	...	...	...	3	3	2	3
Radical cure—										
Inguinal	88	8	2	1	29	32	12	15	3	2
Femoral	5	5	...	...	2	1	4	3	...	...
Umbilical	...	2	...	...	...	...	...	2	...	...
Ventral	1	...	...	...	...	...	1	...	...	...
Intestinal anastomosis	...	1	...	...	...	...	...	...	1	...

Operations—continued.

Duration of residence after operation.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
1	4	2	...	...	...	...	...	...	5	2	...	...	Ulnar nerve 4, median 3.
...	...	2	1	...	...	...	...	...	...	3	...	...	Median 2, ulnar 1.
1	...	1	...	...	...	...	...	...	...	...	...	2	Fracture-dislocation, immediate, 1. Paraplegia from caries fatal from hypostatic congestion of lungs.
...	...	1	...	...	...	...	...	...	...	1	...	...	Supra-orbital.
...	1	1	...	...	...	...	...	...	...	...	2	...	For rupture.
...	...	...	...	...	...	1	...	...	...	1	...	...	Rupture after osteotomy of femur.
...	3	1	2	2	...	...	...	...	2	2	...	4	Fatal: meningitis 3, extensive thrombosis of cerebral sinuses 1. All for ear disease.
...	1	...	...	...	...	...	...	...	...	...	...	1	Meningitis.
...	...	...	1	...	...	1	...	...	1	1	...	...	Popliteal aneurysm 1; for rupture after osteotomy of femur 1.
...	...	...	...	...	...	...	1	...	...	1	...	...	Sarcoma of ilium, pulsating.
1	...	...	...	...	...	...	...	...	1	...	...	...	Traumatic aneurysm.
...	1	1	...	...	...	...	...	...	2	...	...	...	Traumatic aneurysm.
...	13	42	9	2	1	...	...	...	66	...	1	...	Erysipelas 1, pyæmia 1.
...	11	20	...	1	...	...	...	...	32	...	...	...	
...	8	4	2	...	...	...	...	...	14	...	...	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	For macroglossia.
1	33	12	5	...	...	...	...	...	47	3	...	1	Erysipelas 1. Fatal case: tubal nephritis.
1	5	4	...	..	...	...	...	...	6	4	...	...	
...	2	1	1	...	...	...	...	...	4	...	...	...	
1	...	...	...	...	...	...	...	...	...	...	...	1	Fatal case: shock.
...	5	...	...	...	...	...	...	...	5	...	...	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	
2	...	1	...	...	...	...	...	...	1	...	...	2	Artifical anus 1.
2	1	1	...	...	...	...	...	...	1	...	...	3	Fæcal fistula 1; artificial anus 1.
2	1	...	...	...	...	...	...	...	...	...	...	3	Resection of gut 2; artificial anus 1.
...		20	7	...	...	...	...	...	29	...	...	1	Fatal case: delirium tremens.
2		6	1	...	...	...	...	...	9	...	...	2	
...	9	71	15	1	...	...	...	...	96	...	...	...	Excision of retained testis 1.
...	1	8	1	...	...	...	...	...	10	...	...	...	
...	...	...	2	...	...	...	. .	...	2	...	...	...	
...	...	...	1	...	...	...	...	...	1	...	...	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	Murphy's button, colon and ileum.

TABLE III.—*Surgical*

SURGICAL OPERATIONS.	Sex.		Age.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60
DIGESTIVE SYSTEM—*continued.*										
Removal of appendix	1	...	...	...	...	...	1	...	...	...
Incision of appendicitic abscess	1	...	...	...	...	...	1	...	...	...
Closure of cæcal fistula	1	...	...	...	...	...	1	...	...	...
For suppurative peritonitis	...	1	...	...	...	...	...	...	1	...
For sinus after appendicitis	1	...	...	...	1	...	...	...	...	...
Circular enterorrhaphy	...	1	...	...	...	...	...	1	...	...
Cholecystotomy	...	1	...	...	...	...	1	...	...	...
For biliary fistula	...	1	...	...	...	...	...	1	...	...
Hæmorrhoids—										
Whitehead	19	8	...	...	...	4	8	8	4	3
Ligature	4	1	...	...	...	...	2	2	1	...
Clamp and cautery	5	...	...	...	...	...	1	2	1	1
Fistula in ano	35	7	...	...	1	9	14	13	4	1
Fissure in ano	3	4	...	...	1	2	4	...	...	...
Prolapse of rectum	1	...	1	...	...	...	...	...	...	...
Incision of stricture of rectum	1	1	...	...	...	...	2	...	...	...
Perforation of stomach	1	...	...	...	1	...	...	...	...	...
Perforating wound of ileum	1	...	...	...	...	...	...	1	...	...
Gastrostomy	2	...	...	...	...	...	...	1	1	...
Colotomy—										
Right lumbar	...	1	...	...	...	...	..	1	...	...
Left lumbar	3	1	...	...	...	...	...	...	...	4
Inguinal	3	5	1	...	...	2	...	1	3	1
Exploratory cœliotomy	3	4	...	...	...	2	...	3	1	1
GENITO-URINARY SYSTEM—										
Circumcision	10	...	3	3	1	2	1	...	...	...
Removal of warts	...	4	...	...	1	3	...	...	...	...
Perinæal section	2	1	...	...	...	...	2	...	...	1
External urethrotomy	9	...	...	...	1	1	3	3	1	...
Internal urethrotomy	3	...	...	...	...	...	3	...	...	...
Supra-pubic cystotomy	5	4	1	...	...	1	1	...	1	5
Aspiration of bladder	1	...	...	...	...	...	1	...	...	...
Supra-pubic lithotomy	7	...	3	1	...	...	1	...	...	2
Lithotrity	3	...	...	...	...	...	...	...	3	...
Urethral calculus	1	...	1	...	...	...	...	...	...	...
Dilatation of urethra	...	1	...	...	...	...	...	...	1	...
Plastic of urethra	...	2	...	...	...	2	...	...	...	...
Excision of urethral abscess	1	...	...	...	...	1	..	...	...	...
Radical cure of hydrocele of cord	3	...	...	...	1	2	...	...	...	...
„ „ of tunica vaginalis	11	...	...	1	6	2	...	2	...	...

Operations—continued.

Duration of residence after operation.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
...	...	...	...	1	...	...	...	...	...	1	...	...	
...	...	...	...	1	...	...	...	...	1	...	...	...	
...	...	...	1	...	...	...	...	...	...	...	1	...	
1	...	...	...	...	...	...	...	...	...	...	...	1	Appendicitis.
...	...	...	...	1	...	..	...	...	...	1	...	...	
...	...	...	1	...	...	...	...	...	1	...	...	...	Previous carcinoma of sigmoid flexure.
...	...	...	1	...	...	...	...	...	1	...	...	...	Gall-stones.
...	...	...	1	...	...	...	...	...	...	1	...	...	
...	7	18	2	...	...	...	...	...	26	...	...	1	Fatal: pneumonia.
...	1	4	...	...	...	...	...	...	5	...	...	...	
...	1	4	...	...	...	...	...	...	5	...	...	...	
1	14	19	7	..	...	...	...	...	42	...	...	...	Excision of fistula 2.
2	3	1	1	...	...	...	...	...	6	1	...	...	
...	...	...	1	...	...	...	...	...	1	...	...	...	Cautery.
...	...	...	2	...	...	...	...	...	...	2	...	...	Both syphilitic.
1	...	...	...	...	...	...	...	...	...	...	...	1	Carcinoma of stomach; septic peritonitis.
1	...	...	...	...	...	...	...	...	...	...	...	1	Penetrating wound of perinæum; septic peritonitis.
...	..	...	2	...	...	...	...	...	...	2	...	...	Malignant of œsophagus.
...	..	...	1	...	...	...	...	...	...	1	...	...	Carcinoma of descending colon.
...	...	1	1	2	...	...	...	...	...	4	...	...	Carcinoma of rectum 4.
1	...	3	4	...	...	...	...	...	...	7	...	1	Carcinoma of rectum 6, carcinoma of rectum and ovary 1, imperforate rectum 1.
1	1	4	1	...	...	...	...	...	...	...	4	3	Carcinoma of pancreas 1, of pylorus 1, of omentum 1, phantom tumour 1, pus from rectum 1, exploration of kidney 1, retro-peritoneal hæmorrhage 1.
3	4	2	1	...	...	...	...	...	10	...	...	...	
...	...	1	2	1	...	...	...	...	4	...	...	...	
1	...	1	...	1	...	...	...	...	1	1	...	1	Fatal case: bladder dilated.
...	...	2	5	2	...	...	...	...	9	...	...	...	Traumatic stricture 1.
...	1	2	...	...	...	...	...	...	2	1	...	...	
1	...	1	4	1	2	...	...	...	1	7	...	1	Malignant of urethra 3, enlarged prostate 2, tubercle of bladder 1, hæmaturia 1, exploration 1, epispadias 1.
...	...	...	1	...	...	...	...	...	1	...	...	...	For retention.
...	...	4	3	...	...	...	...	...	6	...	...	1	Fatal case: pyæmia.
...	2	1	..	...	...	...	...	...	3	...	...	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	Through perinæum.
...	1	...	...	...	...	...	...	...	...	...	1	...	
...	...	1	...	1	...	...	...	...	...	...	2	...	Same case; for laceration after confinement.
1	...	...	...	...	...	...	...	...	1	...	...	...	
...	1	2	...	...	...	...	...	...	3	...	...	...	
...	3	6	2	...	...	...	...	...	11	...	...	...	

TABLE III.—*Surgical*

SURGICAL OPERATIONS.	Sex.		Age.							
	M.	F.	-5	-10	-20	-30	-40	50	-60	+60
GENITO-URINARY SYSTEM—*continued.*										
Excision of spermatocele	1	...	...	...	...	...	1	...	...	...
For undescended testis	2	...	...	1	1	...	...	...	...	...
Castration	6	...	...	...	...	4	1	1	...	...
Nephrectomy	1	1	...	...	...	...	...	2	...	...
Lumbar nephrotomy	1	1	...	...	...	...	...	2	...	...
Subdiaphragmatic abscess	1	...	...	...	...	1	...	...	...	...
Excision of tuberculous abscess of breast	...	3	...	...	...	3	...	...	...	...
Pyosalpinx	...	1	...	...	...	1	...	...	...	...
Tuberculous abscess of cord	1	...	...	...	...	...	...	...	...	1
Hydrocele of hernial sac	...	1	...	...	...	...	...	1	...	...
Ruptured bladder	1	...	...	...	...	...	...	...	1	...
OSSEOUS SYSTEM.										
Tuberculous epiphysitis	2	1	...	3	...	...	...	...	...	...
Scraping for caries of—										
Femur	5	1	...	2	1	...	1	2	...	...
Rib	7	2	2	1	1	3	1	1	...	...
Sternum	3	...	...	...	3	...	...	...	...	...
Ulna	3	2	1	1	1	2	...	...	...	...
Acromion	1	...	...	...	1	...	...	...	...	...
Pelvis	5	2	...	1	2	2	1	1	...	...
Tibia	...	1	...	...	1	...	...	...	...	...
Os calcis	...	1	...	...	...	1	...	...	...	...
Metatarsus	1	...	...	...	1	...	...	...	...	...
Tarsus	1	2	1	1	...	...	1	...	...	...
Inferior maxilla	1	...	...	...	...	...	1	...	...	...
Excision of carious rib	1	...	...	...	1	...	...	...	...	...
Trephining of sternum	1	...	...	...	1	...	...	...	...	...
Removal of necrosed bone from—										
Rib	1	...	...	...	...	...	...	1	...	...
Scapula	1	...	...	1	...	...	...	...	...	...
Inferior maxilla	3	4	2	1	1	2	...	1	...	...
Pelvis	4	...	...	...	2	1	1	...	...	...
Femur	5	2	...	...	5	...	1	...	...	1
Tibia	10	5	...	3	3	3	3	...	2	1
Os calcis	1	...	...	...	1	...	...	...	...	...
Metacarpus	...	1	1	...	...	...	...	...	...	...
Humerus	1	...	...	...	1	...	...	...	...	...
ARTICULAR SYSTEM.										
Excision of—										
Shoulder	1	...	...	...	...	...	1	...	...	...
Elbow	5	2	1	1	1	2	...	1	1	...
Wrist	1	...	...	...	...	...	1	...	...	...
Hip	3	4	1	1	3	1	1	...	...	...

Operations—continued.

Duration of residence after operation.									Result.				Remarks.
ys. 1–4	Dys 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
...	1	...	...	...	...	...	...	...	1	...	...	...	
...	...	1	1	...	...	...	...	...	2	...	...	...	
...	2	3	1	...	...	...	...	...	6	...	...	...	Undescended testis 1, gummatous 2, tuberculous 3.
...	...	1	1	...	...	...	...	...	2	...	...	...	For renal fistula 1, for pyonephrosis 1.
...	...	...	1	1	...	...	...	...	...	1	...	1	For pyonephrosis 1, for renal lithiasis 1. Fatal: peritonitis.
...	...	...	1	...	...	...	...	...	...	1	...	...	Caused by tuberculous kidney.
...	3	...	...	...	...	...	...	...	3	...	...	...	
...	1	...	...	...	...	...	...	...	...	...	...	1	Suppurative peritonitis.
...	...	1	...	...	...	...	...	...	1	...	...	...	Scraped.
...	1	...	..	...	...	...	...	...	1	...	...	...	Femoral; excised.
1	...	...	...	...	...	...	...	...	...	...	...	1	Suture; septic peritonitis.
...	1	...	2	...	...	...	...	...	1	2	...	...	Humerus 2, femur 1.
...	1	2	1	2	...	...	...	...	3	3	...	...	
...	4	5	...	...	...	...	...	...	6	3	...	...	Readmissions 2.
...	...	...	2	1	...	...	...	...	1	2	...	...	Same case.
...	2	2	1	...	...	...	...	...	3	2	...	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	
...	...	4	3	...	...	...	...	...	1	5	...	1	Fatal case: gangrene of leg; amputation.
...	...	1	...	...	...	...	...	...	1	...	...	...	
...	...	...	1	...	...	...	...	...	1	...	...	...	
...	...	...	...	1	...	...	...	...	1	...	...	...	
...	...	3	...	...	...	...	...	...	...	3	...	...	
...	1	...	...	...	...	...	...	...	1	...	...	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	For caries.
...	...	1	...	...	...	...	...	...	1	...	...	...	
...	...	...	1	...	...	...	...	...	...	1	...	...	
...	3	2	2	...	...	...	...	...	3	3	...	1	Fatal case: collapse of lung.
...	..	1	1	1	...	1	...	...	1	3	...	...	
...	1	2	3	1	...	...	...	...	2	5	...	...	
3	3	4	5	...	...	...	...	...	6	9	...	...	
...	...	...	1	...	...	...	...	...	1	...	...	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	
...	1	...	...	...	...	...	...	...	...	1	...	...	
...	...	1	...	...	...	...	...	...	...	1	...	...	
...	...	1	1	4	...	1	...	...	3	4	...	...	Partial 2, old dislocation 1, trauma 1.
...	...	...	1	...	...	...	...	...	...	1	...	...	
...	...	...	3	3	...	1	...	...	3	4	...	...	Anterior 7.

TABLE III.—*Surgical*

SURGICAL OPERATIONS.	Sex.		Age.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60
ARTICULAR SYSTEM—*continued.*										
Excision of—										
Knee	6	2	2	1	4	1	...	...	...	...
„ re-excision	1	...	1	...	...	...	...	...	...	...
„ wedge excision	2	1	...	...	3	...	...	...	...	...
Ankle	1	...	...	1	...	...	...	...	...	...
Metatarso-phalangeal and inter-phalangeal	16	7	...	...	10	11	2	...	...	...
Arthrectomy—										
Elbow	1	1	1	...	...	...	...	1	...	...
Hip	2	...	...	...	2	...	...	...	...	...
Knee	1	...	...	...	1	...	...	...	...	...
Ankle	4	4	1	2	4	...	1	...	...	...
Metatarso-phalangeal	2	1	1	1	1	...	...	...	...	...
Arthrotomy—										
Hip	2	2	...	1	3	...	...	...	...	...
Shoulder	...	2	...	...	1	1	...	...	...	...
Knee	2	3	1	1	1	...	1	1	...	...
Wrist	...	1	...	...	1	...	...	...	...	...
Loose body in knee	4	1	...	...	1	2	1	...	1	...
Forcible movement—										
Shoulder	2	...	...	...	...	...	...	1	...	1
Hip	1	...	...	...	1	...	...	...	...	...
Knee	4	...	...	...	1	...	2	1	...	...
Ankle	1	1	...	...	...	1	1	...	...	..
Osteotomy of—										
Femur, subtrochanteric	5	5	...	1	8	...	1	...	...	...
„ neck	1	...	...	...	1	...	...	...	...	...
„ lower extremity	9	5	...	7	7	...	...	...	...	...
Tibia	2	...	...	...	2	...	...	...	...	...
„ and fibula	7	...	2	2	2	1	...	...	...	...
Scraping sinus of—										
Elbow	2	...	...	1	...	...	...	1	...	...
Hip	2	7	...	2	6	1	...	...	...	...
Knee	...	3	...	1	1	...	1	...	...	...
Foot and ankle	2	...	...	...	2	...	...	...	...	...
Primary amputation of—										
Thigh	2	1	...	...	1	...	1	1	...	...
Syme	...	1	...	...	...	...	1	...	...	...
Leg	...	2	...	1	1	...	...	...	...	...
Fingers and phalanges	2	1	...	1	2	...	...	...	...	...
Toes and phalanges	4	1	...	...	...	4	1	...	...	...
Secondary amputation of—										
Thigh	1	...	...	...	1	...	...	...	...	...
Leg	...	1	...	...	..	...	...	...	1	...
Fingers	1	2	...	1	1	1	...	...	...	...
Toes and phalanges	5	1	...	...	1	...	2	1	1	...

Operations—continued.

Duration of residence after operation.									Result.				Remarks.
Dys. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
...	...	...	3	2	2	1	...	...	3	4	1	...	Subsequent amputation 2.
...	...	1	...	...	...	...	...	...	...	...	1	...	Subsequent amputation.
...	...	...	2	1	...	...	...	...	3	...	...	...	Ankylosis in all.
...	...	...	...	1	...	...	...	...	1	...	...	...	
...	8	7	8	...	...	...	...	...	23	...	...	...	Multiple 6.
...	...	1	1	...	...	...	...	...	...	2	...	...	
...	...	...	...	1	1	...	...	...	1	1	...	...	
...	...	...	...	1	...	...	...	...	...	1	...	...	
...	2	1	2	3	...	...	...	...	1	7	...	...	Syphilitic 1.
...	1	1	...	...	1	...	...	...	...	3	...	...	
...	...	1	2	1	...	...	...	...	...	2	...	2	Fatal: pyæmia.
...	...	...	2	...	...	...	...	...	...	1	...	1	Fatal: pyæmia.
...	...	1	3	1	...	...	...	...	2	...	...	3	Fatal: suppurative arthritis 1, pyæmia 2.
...	...	...	...	1	...	...	...	...	...	...	...	1	Fatal: pyæmia.
...	...	3	2	...	...	...	...	...	5	...	...	...	
1	1	...	...	...	...	...	...	...	...	2	...	...	
...	...	...	1	...	...	...	...	...	...	1	...	...	
...	1	2	1	...	...	...	...	...	2	1	1	...	
1	...	1	...	...	...	...	...	..	2	...	...	...	
...	...	1	4	2	2	1	...	...	10	...	...	...	Rupture of artery and vein 1; subsequent amputation at hip 1.
...	...	...	...	1	...	...	...	...	1	...	...	...	
...	...	...	9	3	...	2	...	...	14	...	...	...	All genu valgum. Double 5.
...	...	...	2	...	...	...	...	...	2	...	...	...	Genu valgum. Double.
...	...	...	4	3	...	...	...	...	7	...	...	...	Genu valgum in all. Double 3; femur also 2.
1	1	...	...	...	...	...	...	...	1	1	...	...	
...	2	4	1	1	1	...	...	...	4	5	...	...	
...	...	2	1	...	...	...	...	...	...	3	...	...	
1	1	...	...	...	...	...	...	...	1	1	...	...	
...	...	...	3	...	...	...	...	...	3	...	...	...	
...	...	...	1	...	...	...	...	...	...	...	...	1	Erysipelas 1.
...	...	...	1	1	...	...	...	...	2	...	...	...	Lower third 1, upper third 1.
1	...	1	1	...	...	...	...	...	3	...	...	...	
...	4	1	...	...	...	...	...	...	5	...	...	...	
...	...	...	1	...	...	...	...	...	1	...	...	...	
...	...	...	1	...	...	...	...	...	1	...	...	...	
1	1	1	...	...	...	...	...	...	3	...	...	...	
...	3	3	...	...	...	...	...	...	6	...	...	...	

TABLE III.—*Surgical*

SURGICAL OPERATIONS.	Sex.		Age.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60
ARTICULAR SYSTEM—*continued.*										
Amputation for diseases—										
Femur	7	3	1	...	4	1	1	...	...	3
Leg	4	2	...	...	...	2	1	2	...	1
Syme	3	1	...	...	1	1	1	...	...	1
Forearm	2	...	...	...	...	...	1	1	...	...
Arm	2	...	...	...	1	...	1	...	...	...
Fingers and phalanges		2	...	...	...	1	2	1	...	1
Toes and phalanges	1	1	...	...	1	1	...	...	...	...
Suture of tendons	1	3	...	...	2	1	...	...	1	...
Resection and suture of tendons	2	1	...	...	1	2	...	...	...	...
Reduction of dislocations—										
Subcoracoid	6	2	...	...	1	1	1	2	2	1
Subspinous	1	...	...	...	...	...	...	...	1	...
Subglenoid	1	...	...	...	...	...	...	...	...	1
Elbow	1	...	...	...	...	...	1	...	...	...
Hip	1	...	...	...	...	1	...	...	...	...
Wiring of fractures—										
Humerus	1	...	...	...	1	...	...	...	...	...
Olecranon	2	...	...	...	...	1	1	...	...	...
Patella	4	2	...	...	...	2	1	3	...	...
Tibia	1	...	...	...	...	...	...	1	...	...
Excision of bursæ and ganglia	5	20	...	1	7	10	5	1	1	...
AUDITORY SYSTEM.										
Incision of membrane	1	...	...	...	...	1	...	...	...	...
Removal of polyp	...	1	...	1	...	...	...	...	...	...
Removal of bone from mastoid	18	16	8	9	9	4	2	1	1	...
Trephining over cerebellum	3	2	...	...	4	...	1	...	...	...
„ „ temporo-sphenoidal lobe	...	2	...	...	2	...	...	...	...	...
MALFORMATIONS AND DEFORMITIES.										
Tenotomy	15	12	9	9	7	1	1	...	...	...
Phelps	4	4	1	5	2	...	...	...	...	...
Tarsectomy	2	2	2	2	...	...	...	...	...	...
Myotomy of sterno-mastoid	...	1	...	...	1	...	...	...	...	...
Dupuytren's contraction	2	...	...	...	...	1	...	1	...	...
Ingrowing toe-nail	2	2	...	...	1	2	...	...	1	...
Deviation of septum nasi	1	...	...	...	1	...	...	...	...	...
Hypertrophy of lip	..	1	...	...	1	...	...	...	...	...
Excision of metacarpal head	1	...	...	...	...	...	1	...	...	...
Wiring of ununited fracture	2	...	...	...	...	...	1	1	...	...
For single harelip	...	9	9	...	...	...	...	...	...	...

Operations—continued.

Duration of residence after operation.									Result.				Remarks.
s. 1–4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
1	2	3	3	1	...	...	...	...	8	...	...	2	Through condyles 2, lower third 5, middle third 1, upper third 2. Fatal: septic gangrene 1, diabetes 1.
..	...	...	6	...	...	...	...	...	6	...	...	...	Lower third 2, upper third 4.
..	1	...	1	2	...	...	...	...	4	...	...	...	
..	1	...	1	...	...	...	...	...	2	...	...	...	Lower third 2.
..	...	2	...	...	...	...	...	...	2	...	...	...	Lower third 2.
..	3	2	...	...	...	...	...	...	5	...	...	...	
1	1	...	...	...	...	...	...	...	2	...	...	...	
..	3	1	...	...	...	...	...	...	4	...	...	...	
..	2	1	...	...	...	...	...	...	3	...	...	...	
4	3	...	1	...	...	...	...	...	8	...	...	...	
..	1	...	...	...	. .	...	...	...	1	...	...	...	
1	...	...	...	...	...	...	...	...	1	...	...	...	
1	...	...	...	...	...	...	...	...	1	...	...	...	
..	...	...	1	...	...	...	...	...	1	...	...	...	Compound.
..	...	...	1	...	...	...	...	...	1	...	...	...	
..	1	1	...	...	...	...	...	...	2	...	...	...	
..	...	3	2	1	...	...	...	...	4	2	...	...	Suppurated 2. Open method in all.
..	...	...	1	...	...	...	...	...	...	1	...	...	Necrosis. Compound fracture.
1	13	7	2	...	...	...	2	...	24	1	...	...	
1	...	...	...	...	...	...	...	...	1	...	...	...	
..	...	1	...	...	...	...	...	...	...	1	...	...	
2	3	16	11	1	1	...	...	...	21	7	1	5	Fatal: pyæmia 1, meningitis 3, extensive thrombosis of sinuses 1; nothing found P.M. 1.
1	1	1	...	2	...	...	...	...	1	1	...	3	Fatal: meningitis in all; abscess found 1.
1	...	1	...	...	...	...	...	...	...	...	...	2	Fatal: meningitis in both.
2	10	7	5	2	1	...	...	...	15	11	1	...	Flexion at knee 1, pes cavus 1, talipes equinovarus 12, talipes equinus 7.
...	...	...	2	4	...	...	2	...	7	1	...	...	Double 2.
...	...	...	3	1	...	...	...	...	4	...	...	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	Sternal head.
...	1	1	...	...	...	...	...	...	1	...	1	...	
1	2	1	...	...	...	...	...	...	4	...	...	...	
1	...	...	...	...	...	...	...	...	1	...	...	...	
...	1	...	...	...	...	...	...	...	...	1	...	...	
1	...	...	...	...	...	...	...	...	1	...	...	...	
...	...	1	1	...	...	...	...	...	2	...	...	...	Tibia in both.
...	3	4	2	...	...	...	...	...	7	...	1	1	Fatal: bronchitis.

TABLE III.—*Surgica*

SURGICAL OPERATIONS.	Sex.		Age.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60
MALFORMATIONS AND DEFORMITIES—*continued.*										
For double harelip	1	...	1	...	...	...	...	...	...	...
For cleft palate	3	3	...	3	2	1	...	...	...	...
Removal of projecting septum nasi	1	...	1	...	...	...	...	...	...	...
Excision of supernumerary	1	...	1	...	...	...	...	...	...	...
„ of branchial fistula	...	1	...	...	1	...	...	...	...	...
„ of spina bifida	1	...	1	...	...	...	...	...	...	...
For epispadias	...	3	...	...	...	...	3	...	...	...
For extroversion of bladder	2	...	2	...	...	...	...	...	...	...
For atresia ani	...	2	2	...	...	...	...	...	...	...
For imperforate rectum	1	...	1	...	...	...	...	...	...	...
For malformation of rectum	..	1	1	...	...	...	...	...	...	...
Plastic for cicatricial contraction	8	3	2	2	3	1	...	2	1	...
MISCELLANEOUS.										
Trephining of skull	4	...	...	1	...	1	...	1	...	1
„ „ with elevation	1	...	...	...	...	...	1	...	...	...
Elevation of depressed fracture	1	...	...	...	1	...	...	...	...	...
Drainage of cerebral abscess	1	...	...	...	...	...	1	...	...	...
Exploration of brain	1	...	...	...	...	...	1	...	...	...
Extraction of bullet	1	...	...	...	...	1	...	...	...	...
Spinal abscess—										
Irrigation and suture	3	4	1	4	1	...	1	...	...	...
„ and drainage	15	2	...	5	7	4	...	...	...	1
Scraping of gumma	...	2	...	...	...	2	...	...	...	...
Incision and scraping of carbuncle	1	...	...	...	...	...	...	...	1	...
Excision of eyeball	1	...	...	...	...	...	...	...	1	...
„ of malignant pustule	1	...	...	...	...	...	1	...	...	...
Electrolysis of nævus	...	1	1	...	...	...	...	...	...	...
Suture of abdominal rings	1	...	...	...	1	...	...	...	...	...
Removal of projecting spicule	1	...	...	...	...	...	...	1	...	...
Extraction of foreign body from leg	2	1	...	1	...	1	...	1	...	...
Excision of lupus	2	3	...	...	4	...	...	1	...	...
Scraping of lupus	3	6	...	...	3	6	...	...	...	...
Removal of wire suture	2	...	...	...	1	...	...	...	1	...
, of ivory peg	1	1	...	...	1	1	...	...	...	...
Total	871	505								
	1376									

perations—continued.

Duration of residence after operation.									Result.				Remarks.
s. 4	Dys. 5–13	Wks 2–4	Mts. 1–2	Mts. 2–4	Mts. 4–6	Mts. 6–9	Mts. 9–12	Mts. +12	C.	R.	U.	D.	
.	...	...	1	...	...	...	...	...	...	...	...	1	
.	1	5	...	...	...	...	...	...	4	...	2	...	
..	...	...	...	1	...	...	...	...	1	...	...	...	
1	...	...	...	...	...	...	...	...	1	...	...	...	
..	1	...	...	...	...	...	...	...	1	...	...	...	
.	1	...	...	...	...	...	...	...	...	...	...	1	Fatal: no cause found.
.	...	...	1	1	1	...	...	...	...	3	...	...	Same case.
..	...	...	1	...	...	1	...	...	...	2	...	...	Same case.
..	1	1	...	...	...	...	...	...	1	...	...	1	Fatal: broncho-pneumonia.
1	...	...	...	...	...	...	...	...	1	...	...	...	
..	...	1	...	...	...	...	...	...	...	...	...	1	Fatal: diarrhœa.
..	1	5	3	2	...	...	...	...	4	7	...	...	
2	...	2	...	...	...	...	...	...	1	...	...	3	Fatal: bullet wound; extra-dural abscess; hæmorrhage.
..	...	1	...	...	...	...	...	...	...	...	...	1	Cerebral abscess.
..	1	...	...	...	...	...	...	...	1	...	...	...	
..	1	...	...	...	...	...	...	...	...	...	...	1	
..	1	...	...	...	...	...	...	...	...	...	...	1	Cerebral abscess.
..	...	1	...	...	...	...	...	...	1	...	...	...	From chest; pleura not wounded.
..	...	2	3	2	...	...	...	...	...	7	...	...	
1	1	4	3	5	...	3	...	...	...	15	...	2	Fatal: shock, phthisis. Double 2.
..	...	2	...	...	...	...	...	...	2	...	...	...	Same case.
..	...	...	1	...	...	...	...	...	1	...	...	...	
..	...	...	1	...	...	...	...	...	1	...	...	...	Epithelioma of inner canthus.
1	...	...	...	...	...	...	...	...	...	...	...	1	
..	...	1	...	...	...	...	...	...	...	1	...	...	
.	...	1	...	...	...	...	...	...	1	...	...	...	
..	1	...	...	...	...	...	...	...	1	...	...	...	After Pott's fracture.
1	2	...	...	...	...	...	...	...	3	...	...	...	
1	...	2	2	...	...	...	...	...	4	1	...	...	
3	3	2	1	...	...	...	...	...	...	9	...	...	
1	...	...	1	...	...	...	...	...	2	...	...	...	From tibia in both.
1	1	...	...	...	...	...	...	...	2	...	...	...	From knee 1, from metatarsal bone 1.
									1027	238	23	88	
									1376				

SUMMARY OF DISEASES.

GENERAL DISEASES.

ERYSIPELAS (admitted with the disease).

Males 41, females 28. C. 62, R. 1, D. 6.

Situation.—Upper extremity 8; lower extremity 8; external genitalia 1; side 1; front of trunk 1; remainder face and scalp.

Causation.—Abrasion of elbow 2; removal of sebaceous cyst 1; abrasion of leg 2; abrasion of head 3; parturition 1; scalp wound 5; abscess of leg 1; ulcer of face 1; stab of neck 1; vaccination 1; bedsore 1; recurrent 4; cellular cutaneous 3; remainder, cause undetermined.

Treatment.—Incision 10; ergotinum 2; remainder hot lotions.

Fatal cases.

1. Female, æt. 3 weeks. Cellular cutaneous erysipelas extending over abdomen, groins, and back. This was followed by sloughing of the skin on the abdomen. Gangrene of vulva, perinæum, and buttocks. Death ensued on the 15th day. P.M.—Organs were found to be normal.

2. Female, æt. 25. Puerperal erysipelas of vulva and buttocks. Patient was confined 21 days before admission. Erysipelas showed itself 11 days before admission. The fever was high, and patient was treated with tepid sponging. Just before death temperature reached 108°. P.M.—Recent granulations on mitral valve; lower lobe of right lung was collapsed; right Fallopian tube was found to be bent behind uterus and was adherent; there was a localised patch of peritonitis opposite its fimbriated end. The uterus was found to be empty and undergoing involution.

3. Male, æt. 42. Erysipelas of face. No cause. Patient very violent; delirium tremens ensued; fever high; tepid sponging employed. Death on 6th day. P.M.—Lungs congested. Kidneys: cortices swollen and injected; capsules adherent.

4. Female, æt. 2 weeks. Erysipelas of leg. No cause discovered. The erysipelas was confined to the leg, thigh, and buttocks. Child vomited. Temperature was high, reached 106°. Death ensued on 13th day. No P.M.

5. Male, æt. 34. Erysipelas of face. Cause unknown. Œdema of eyelids.

Temperature high; delirium. Tepid sponging. Death on 4th day. P.M.—Adhesions in pleura; lungs greatly engorged; kidneys engorged and tough.

6. Male, æt. 33. Facial erysipelas. Cause unknown. Albumen discovered in urine. Patient became delirious and maniacal; this was succeeded by coma, and death ensued on 9th day after admission. P.M.—Lungs congested. Kidneys: tubal nephritis.

TETANUS.

Males 3. C. 1, D. 2.

1. Male, æt. 38. No cause discovered. Five days before admission jaws felt stiff, but patient continued his occupation. Two days before admission felt ill and could not do his work. Rigor the day before admission. On the morning of admission consulted a doctor, who sent him to the hospital. On admission eyebrows raised, lips pursed up. Inability to open mouth more than ¼ inch. The jaw muscles very rigid. Opisthotonos. Abdomen and legs in a state of rigidity. Complained of considerable pain in limbs. Twitchings in neck, arms, and legs. Retention. Bowels opened by Ol. Ricini. Chloral in doses of gr. xxx administered every 4 hours. The twitchings ceased 5 days after admission, as did also the retention, but the pains in the limbs continued. Eight days after admission delirium and restlessness, but jaw was less rigid, and face regained its natural expression. Twelve days after admission rigidity almost gone from muscles. Chloral discontinued. Occasional delirium, but progress good until his discharge on 34th day.

Fatal cases.

1. Male, æt. 34. Caused by point of pencil running into his hand 2 months ago. Noticed jaw muscles became stiff while eating; jaws gradually closed until the day of admission. On admission jaws spasmodically clenched, but occasionally they can be opened to ¾ inch. Takes food well. Chloral and bromides were administered. 4th day, the spasm of jaw muscles more frequent; pains in his neck and back. Risus sardonicus; abdomen rigid; troubled with mucus in throat. Ol. Ricini ʒij given after calomel gr. x had failed to act. 7th day, retention. The mucus very troublesome, but the bowels are open. 8th day, takes his food well, is calmer, and sleeps well. 9th day, patient worse; has slight general spasms of tonic nature; temperature raised. Fed *per rectum*. Involuntary passage of urine. Death, which was due to exhaustion, took place on 10th day. P.M.—The organs were found to be normal. There was a small discoloured spot on the thenar prominence from the mark of the pencil.

2. Male, æt. 41. Wound on the hand inflicted by the iron on a cart-wheel 6 days previously. Wound became inflamed. Two days before admission patient had a stiff neck, and 1 day before admission his jaw became rigid. On admission the jaws were clenched and the neck rigid and extended. Abdomen rigid, as were also the limbs to some extent. The respirations were rapid, shallow, and difficult. Wound excised. Exacerbation of symptoms rapidly occurred; spasms 4—5 times in the hour. Patient had to be fed by the nasal tube. 2nd day, risus sardonicus; fed under chloroform. The spasmodic attacks increased in frequency until they came on every 2 or 3 minutes. Death from asphyxia. P.M.—Lungs engorged, but otherwise the organs were normal.

ANTHRAX INFECTION.

Male, æt. 39. Sorter of Chinese hides. No trauma. Pustule commenced 3 days previously. Pustule below left eye; bacilli detected in discharge. Puffy swelling of left side of neck below angle of jaw. Pustule excised 2nd day; temperature rose to 101·2°. 3rd day, collapse; thermometer would not register any temperature; vomiting; pain in abdomen. Death on 4th day. No P.M.

SYPHILIS.

Congenital.—Females 5. C. 1, R. 1, U. 1, D. 2. Iritis and keratitis 2; necrosis of jaw 1, of scapula 1; arthritis of knee and ankle 1; osteitis of humerus 1; perforation of palate 1.

Fatal cases.

1. Female, æt. 7 months. Wasted child, covered over lower part of abdomen and legs with subcutaneous gummata, some fluctuating; no condylomata. Death in 24 hours. P.M.—Mesenteric glands were enlarged; no deposit of tubercle; no evidence of rickets; bones of skull were healthy; lungs normal.

2. Female, æt. 5 months. Emaciated child; skin dusky brown; radiating fissures round the mouth; double epiphysitis at upper ends of humeri. Treated with Hyd. c̄ Cretâ; some improvement. Death from inanition on 43rd day. P.M.—Viscera normal. No sign of congenital syphilis.

Primary.—Males 2, females 2. C. 3, R. 1. Phimosis 1; abscess in groin 1; vaginal discharge 1.

Secondary.—Males 2, females 21. C. 8, R. 14, U. 1. Condylomata 11; sore throat 6; general glandular enlargement 2; loss of hair 1; panophthalmitis 1; ulceration of fauces 5; abscess of Bartholin's gland 1; peripheral neuritis 1; pregnancy 1. Rash: macular in 1, squamous in 3, roseolous in 2, tuberculated in 1, ulcerated in 2, rupial in 1, pustular in 3.

Tertiary.—Males 9, females 10. C. 13, R. 5, U. 1. Ulcers of leg 5; gumma of skull with involvement of cranial nerves 1; gumma of leg 1, thigh 1, elbow 2, abdomen 2, radius 2, scalp 1, forearm 1, neck 1; ulcers of shoulder 1, forearm 1, tongue 1; pustular eruption of face 1, body 1.

LOCAL DISEASES.

TUMOURS.

Carcinomata.

Spheroidal.—Breast.—Females 31. C. 25, U. 5, D. 1. Right 15, left 16. Axillary glands involved in 29, supra-clavicular in 1. Average duration before admission 48½ weeks, extremes being 3 years and 3 weeks. Single 10; married 21, of whom 11 had borne children. Family history of carcinoma in 5. History of trauma in 1, of abscess in 5. Interstitial mastitis in opposite breast 1; cyst in opposite breast 1; atrophic 2; scarlet fever 1; œdema of arm 1; suppuration in axilla 1.

Treatment.—Amputation of breast and clearance of axilla 23; amputation alone 3; *nil* 5; discharged at own request 3; skin-grafting 1.

Fatal case.—Female, æt. 43. Left breast uniformly enlarged, consistence hard; skin adherent and dimpled; movable on deeper structures; glands in axilla. Operation on 5th day: amputation of breast; axilla cleared. Raw surface left; grafted. Abscess in axilla. On 5th day after operation contracted scarlet fever, and was transferred to the Medical wards. Death on 34th day. P.M.—Wound granulating well; no secondary growth; lungs congested; spleen diffluent; kidneys, tubal nephritis; all organs were somewhat decomposed.

Recurrent in breast.—Females 5. C. 2, U. 3. Right 1, left 4. Interval since removal: 2½ years, 15 months, 12 months, 8 months, 3 months. Secondary growth in femur 1; pleurisy 1; ulceration of skin 1.

Treatment.—Removal in 2; aspiration of chest in 1.

Recurrent in glands.—Females 4. C. 1, U. 2, D. 1. Supra-clavicular 2; axillary 4; abdomen 1 (ascites). Interval since removal: 7 years, 5 years, 2 years, 8 months. Second recurrence 1. Excision 1.

Recurrent in supra-clavicular glands.—Fatal case.—Female, æt. 53. Previous partial removal of breast (9 months). Readmitted with secondary glands in left supra-clavicular region. Operation: removal of glands; difficult dissection. Dressings were soon soaked through; continuous discharge of serous fluid from wound until death from collapse on 9th day. P.M.—Body well nourished. Thoracic duct found cut across as it arched over into the angle between the jugular and subclavian veins. A small ligature on tissue immediately below cut duct, as though a blood-vessel had been severed at the same moment. Dome of pleura uninjured. Lungs: cured tubercular focus at right apex. Both pleuræ almost obliterated by adhesions. Right heart full of blood. Left border of great omentum adherent to left Fallopian tube and ovary.

Upper jaw.—Fatal case.—Female, æt. 57. Neuralgia 5 months; swelling of left side of face 10 weeks; obstruction of left nostril. Firm elastic tumour occupying facial aspect of left superior maxilla; no irregularity of alveolar border. Protrusion of left eye with slight ptosis. Operation: growth scraped from interior of antrum; cavity sponged out; drainage. Foul discharge. Patient gradually sank, and died on 44th day. No P.M.

Pancreas.—Fatal case.—Female, æt. 46. Eight months previously had headache, anorexia, and vomiting; jaundice 6 months previously. Pain in region of right hypochondrium; extreme emaciation; liver enlarged almost to umbilicus; gall-bladder felt distended and reaching to within one inch of umbilicus. Operation on 78th day. Laparotomy: gall-bladder found enlarged and tense; no stones found in cystic duct. Gall-bladder incised, evacuation of bile-stained mucus. Cystic swelling found extending from the transverse fissure; incised, brown fluid was evacuated; probe passed from cavity into duodenum, this therefore appeared to be common duct. Edges sutured into abdominal wound; tube inserted; portion of gall-bladder left protruding; rest of wound sutured up. Drainage of bile-stained fluid continued until second operation on 224th day from admission. Incision in right semilunar line, abdomen opened, and hard nodule was felt on edge of liver, considered to be malignant; wound closed. Increase of jaundice; rapid emaciation; abscess in abdominal wound; œdema of right foot

and ankle. Death on 252nd day. P.M.—Body jaundiced and wasted. In neighbourhood of wound abdominal wall adherent to transverse colon, gall-bladder, and duodenum. It appeared that the gall-bladder was a small sac containing white mucoid fluid. Cystic duct obliterated. Hepatic and what was once the common bile-duct were dilated up to ½ inch diameter. Opening of the common bile-duct into duodenum was potential only. Obstruction due to displacement of orifice, produced by cicatrising ulcer in duodenum corresponding to site of head of pancreas, which was infiltrated with scirrhous growth. Secondary growths in liver, lungs, and kidneys.

Urethra.—Females 2. R. 2. Supra-pubic cystotomy in both; removal of growth in 1.

Duct Carcinoma.

1. Female, æt. 60. Married, 2 children. Tumour 6 months. Discharge from nipple for 1 month before admission. Hard mass just below left nipple, size of Tangerine orange. Skin adherent, but deep structures free. Amputation of breast. Axilla cleared. Two glands removed. Discharged cured on 18th day. Tumour proved a duct carcinoma on microscopic examination.

2. Female, æt. 39. Married, 3 children. Tumour under left areola 14 months. Size of nut at first. Increased rapidly during last 3 months. Some pain. No discharge from nipple. Tumour size of orange situated beneath nipple. No deep adhesions. Nipple retracted. Growth hard. Glands in axilla. Amputation of breast; axilla cleared. Discharged cured on 20th day.

Columnar Carcinoma.

Stomach.—Female, æt. 47. Admitted with left inguinal hernia. Just above and to the right of umbilicus globular swelling, tender. Patient extremely collapsed and constantly sick. Operation. Incision over tumour. Portion of omentum found gangrenous; ligatured. Knuckle of small intestine gangrenous. Incision enlarged. Wall of stomach found black and gangrenous; perforated. Drainage employed; wound closed. Extreme collapse. Death in 12 hours. P.M.—General septic peritonitis. Perforation of stomach situated in floor of ulcer which lay just to left of pylorus. Floor of ulcer covered with exuberant polypoid masses. No stricture of pylorus. No secondary growths. All organs extremely decomposed. Microscopically growth was an epithelioma.

Carcinoma of colon and ileum; intestinal anastomosis.—Female, æt. 52. Operation for removal of cystic adenoma of right ovary 4 years previously at which operation carcinoma of the cæcum was noted. Pain in abdomen and distension for 7 months. Coils of intestine visible through belly wall. Peristalsis observed. Abdomen opened in middle line. Irregular hard mass found involving ileum, cæcum, and colon. Vermiform appendix found distended. Murphy's button introduced into ascending colon and ileum and the two approximated by the button. Few Lembert's sutures added. Small patches of growth noticed on intestinal walls. Abdomen closed. Bowels open on following day. Button passed on 26th day after operation.

Rectum.—Males 9, females 8. C. 2, R. 11, U. 4. Duration: under 6 months 7, under 12 months 6, under 2 years 3, under 5 years 1; reaching down to within 1 inch of anus 2, 2 inches 7, 3 inches 4, 4 inches 2, 5 inches 1. Polypoid

growth 1; intestinal obstruction 1; prostate involved 1; sacrum involved 1; carcinoma of ovary 1.

Treatment.—Left lumbar colotomy 4; inguinal colotomy 7; operation not advised 3; discharged at own request 1; excision of rectum 2, peritoneum opened in both; infusion 1.

Squamous carcinoma.—Males 2. C. 1, R. 1.

Face.—Inner canthus 1; over mastoid 1. Excision 2; excision of orbit 1; removal of bone 1.

Lower lip.—Males 9, female 1. C. 10. Duration: 5 years, 4 years, 15 months, 10 months, 6 months, 5 months, 4 months, 2 months 3. Glands involved 5; two growths on lip 1; epithelioma of penis 1. Removal in all.

Tongue.—Males 12, females 3. C. 11, U. 4. History of syphilis 2; chronic superficial glossitis 5; glands involved 9. Duration in months: 18; 14; 12; 6, 4 cases; 4, 3 cases; 3, 2 cases; 2, 2 cases; 1 month. Floor of mouth involved 1 fauces and soft palate 1; fauces.

Treatment.—Excision 1; partial excision 10; not advised 4; ligature of both linguals 1; ligature of lingual 1; jaw divided at angle 1; facial nerve cut 1; glands removed 2.

Recurrent of tongue.—Males 3. R. 3. Recurrence in 2 months, 6 months, 10 months. Excision in all; jaw divided 1.

Floor of mouth.—Males 2, female 1. C. 2, D. 1. Duration in months: 5, 2 9. Glands 2. Excision in all; jaw divided 1; portion of alveolar border removed 1.

Fatal case.—Male, æt. 63. Small hard nodule in anterior part of floor of mouth for 2 months. Excision with division of jaw at symphysis; jaw wired; drainage through floor of mouth. Temperature rose to 104·2° F. on 17th day. Coarse crepitations in lungs. Rapid breathing. Death on 24th day. P.M.—Right pleura obliterated. Six ounces of bloody fluid in left pleura. Left lobar pneumonia. Small hard calcareous nodule in submaxillary region, doubtful whether situated in gland or duct.

Floor of mouth, recurrent.—Male 1. R. 1. Recurrence in 1 month. Excision with portion of tongue and anterior portion of inferior maxilla.

Secondary glands of neck.—Males 5. C. 1, R. 2. Previous epithelioma of tongue 3, of lip 2. Excision in 4; tracheotomy 1.

Palate and cheek.—Fatal case.—Male, æt. 71. Ulcer of palate 4 months. Growth involved hard and soft palate, tonsil, cheek. Glands in neck. Breath foul. High temperature. Impairment of intellect. Death on 15th day. P.M.—Septic meningitis. Growth had entered cranium through sphenoidal fissure.

Œsophagus.—Males 9. R. 4, D. 5. Level of cricoid 1; cardiac extremity 1; tracheal bifurcation 2; remainder 10½, 11½, 13, 8, and 7½ inches from teeth. Glands involved 1.

Treatment.—Gastrostomy 2; tracheotomy 1; Symonds' tube 1; glands removed 1.

Fatal Cases.

1. Male, æt. 37. Stricture of œsophagus 5 months. Dysphagia. Emaciation. Bougie passed 7½ inches. Temperature raised on admission. Dyspnœa on 5th day. Temperature rose to 104·8°. Delirium and death on 7th day. P.M.—Body well nourished. Large irregular ulcerated cavity in œsophagus 3 inches below cricoid. Suppuration behind œsophagus extending down to right pleura, which contained ½ pint of pus. Septic broncho-pneumonia of right apex.

2. Male, æt. 52. Dysphagia 3 months. Paralysis of right vocal cord. Stricture 8 inches from teeth. Symons' tubes. Broncho-pneumonia. Death on 36th day. P.M.—Body wasted. Complete ring of hard white growth replacing walls of œsophagus ¾ inch broad, cricoid level. Plate of similar growth 3 inches below this point. Pus between œsophagus and trachea; ¾ pint of pus in left pleura. No secondary growth.

3. Male, æt. 53. Dysphagia 6 months. Stricture apparently corresponds to middle of gladiolus. On 5th day temperature rose to 102·4°. Great quantity of expectoration. Acute bronchitis. Death on 11th day. No P.M.

4. Male, æt. 58. Dyspnœa. Tracheotomy. P.M.—Carcinomatous growth at junction of œsophagus and pharynx. Larynx not involved but crushed inwards by large cancerous growth. Pouch of pharynx on right side converted into a hard grey growth, with central cavity opening upwards. Lungs emphysematous. Pleuræ, many adhesions.

5. Male, æt. 45. Tumour right side of neck 5 months. Emaciation. Dysphagia. Partial removal of growth. Stricture of œsophagus at its entrance into thorax. Wound suppurated. Erysipelas on 89th day, spreading from wound. Disappeared in 5 days. Discharged on 121st day. Readmitted in 10 days. Emaciation extreme. Fluid swallowed with difficulty. Old wound granulating; edges hard. Nutrient enemata. Death on 8th day after readmission. P.M.—Carcinomatous stricture one inch below cricoid; perforation of posterior wall of trachea; growth fungating into the lumen. Secondary glands about œsophagus. Lungs œdematous and studded with secondary growth.

Penis.—Male, æt. 55. Nine months ago noticed small sore on penis. Epitheliomatous ulcer of opposed surfaces of prepuce and glans on left side. Glands on both sides. Irregular polypoid growth on anterior wall of the rectum. Upper margin within reach of finger. Stricture of urethra. Cock's puncture. Amputation of penis 1½ inches in front of scrotum. Dilatation of stricture. Excision of rectum. Mucous membrane sutured to skin. Sphincter left intact. Patient did well for a time, but gradually emaciated, and died on the 98th day. P.M.—Extreme emaciation. Parts about rectum so well healed that it was almost impossible to see that the rectum had been excised. No secondary growths in glands or elsewhere. Lungs: pleura adherent over upper lobes, which were perfectly airless and studded with recent and old tubercle. Extensive fibroid change. Small active cavity at left apex. Tuberculous broncho-pneumonia at right base.

Squamous epithelioma.—Lips and penis.—Male, æt. 69. Five years previously small nodule on lower lip; 3 years previously warts appeared on prepuce. Epithelioma of lower lip. Submaxillary glands involved. Epithelioma involving

prepuce and glans penis. Hard and indurated. Operation. Amputation of penis and excision of epithelioma of lip. Progress. Cured.

Scrotum.—Male, æt. 50. Sweep. History of 1 year. Glands in both groins. Removal of growth and glands.

Nature undetermined.—Stomach.—Males 2. U. 1, D. 1. Cœliotomy, growth involved pylorus. Too extensive for removal.

Fatal case.—Male, æt. 42. Vomiting, &c., last 3 to 4 years. Tumour in abdomen 6 weeks. Emaciation. Tumour in epigastric region 4 inches long. Hard; movable. Stomach washed out. Nutrient enemata. Collapse. Death on 4th day. No P.M.

Rodent ulcer.—Males 6, females 4. C. 8, U. 1, D. 1. Duration: 10 years, 1; 8 years, 1; 7 years, 2; 4 years, 3; 2 years, 2; 1¼ years, 1. Outer canthus 3; inner canthus 2; mastoid 1; nose 1; angle of jaw 1; cheek 2. Excision in 8. Recurrent 1, removal 18 months previously. Movements of eye limited 1. Carcinoma of stomach 1.

Fatal case.—Male, æt. 62. Seven years previously scratched right cheek with a rusty nail. Healed. Pimple appeared on scar. Large ulcer on right cheek, adherent to bone; edges raised and hard. Tumour in left hypochondrium and epigastrium. Severe pain in stomach. Temperature rose to 102·4°. Death on 28th day. P.M.—General septic peritonitis. Large flat growth in the anterior wall of the stomach. Two obviously secondary growths in liver. Stomach dilated. Pylorus not narrowed. Mucous membrane in a state of chronic ulceration. Some cicatricial tissue.

Sarcoma.

Superior maxilla.—Males 2, female 1. Undetermined 2; mixed-celled 1. Partial excision 1; too extensive 1; refused treatment 1.

Os innominatum.—Males 2, female 1. R. 1, U. 2. Readmission 1. Undetermined 1; pulsating round-celled 1; ligature internal iliac artery 1; amputation of femur for spontaneous fracture 1.

Male, æt. 41. Pain in right leg 18 months. Tumour noticed 6 months. Limited above by iliac crest and behind by mid point of sacrum. Superficial measurement 5 inches by 5 inches. Pulsation; bruit. Discharged on 7th day. Readmitted after 7 days. Incontinence of urine and fæces. Tumour was thought to be either a pulsating sarcoma or an aneurysm. Ligature of internal iliac by transperitoneal method on 6th day. On 3rd day after operation return of pulsation. Pain in right leg continued, and required morphia. Pulsation rather more marked on 22nd day after operation. Cystitis. Bladder washed out. On 60th day, while patient was turning in bed, femur fractured just below great trochanter. Great displacement; lower fragment drawn upwards and outwards. Extension, and long outside splint applied. Hard nodule noticed in situation of gall-bladder. Liver slightly enlarged. On 100th day right femur one inch shorter than left; considerable thickening at seat of fracture. Still pulsation in sacro-iliac tumour. Cystitis continued. On 158th day after operation, amputation through lesser trochanter. Number of dilated vessels found. No attempt at union at seat of fracture. No appearance of growth. Medullary canal somewhat enlarged. Some suppuration in stump. Cystitis

continued. Patient discharged 232 days after admission. Round-celled sarcoma in medullary canal at seat of fracture.

Sacrum—Fatal case.—Female, æt. 40. Thirteen years ago had paraplegia with partial recovery. Eighteen months previously pricking shooting pain in leg. Six months previously pain in lumbo-sacral region. Tumour in lumbo-sacral region. Prominence of spine. Swelling elastic; tender on percussion. Dulling of sensation over both lower limbs, especially on dorsum of feet. Knee-jerks and plantar reflexes absent. Muscles wasted and flabby. Operation. Greater part of sacrum found replaced by soft vascular growth; removal impossible. Saline infusion. Severe pain over sacrum. Death on 14th day. P.M.—Body well nourished. Greater part of bodies of 4th and 5th lumbar vertebræ and upper part of sacrum replaced by soft growth, which also surrounded the sacrum. Growth was a myxo-sarcoma.

Femur.—Female, æt. 14. Twenty-one days previously fall on knee. Synovitis of left knee. Separation of lower epiphysis. Plaster-of-Paris splint. Œdema of leg. Operation. Bone found comminuted. Amputation of thigh in lower third. Great shock. Infusion. Death on 29th day. P.M.—All tissues bloodless and watery. No secondary growth. Tumour was a giant-celled sarcoma.

Fibula.—Male, æt. 22. Tumour over head of fibula 1 year. Tense and elastic. Plates of bone over tumour. Incision. Tumour found to have ruptured its capsule, and to be extending into inter-muscular planes. Amputation lower quarter of thigh. Wound suppurated. Discharged cured on 38th day. Growth was a giant-celled sarcoma.

Back.—Male, æt. 38. Tumour of back, in same situation as present, excised 3 years ago. One year previously tumour recurred. Smooth tense swelling over left scapula, measuring $4\frac{1}{2} \times 3\frac{1}{2} \times 2\frac{1}{2}$ inches. Excision with portions of trapezius, rhomboideus major, and latissimus dorsi. Small surface left to granulate. Discharged on 37th day. Readmitted after 7 months. Fungating mass with overhanging edges on site of previous operation. Removed by cautery and chloride of zinc. Discharged with open wound on 63rd day. Growth fibro-sarcoma.

Skin.—Females 2. C. 1, D. 1. Leg 1; excised.

Fatal case.—Female, æt. 65. Epidermal horn of lower lid. Sarcoma of base. Small white spot appeared 7 months ago. Three months ago ulcerated, and from that time became more and more protuberant. Horn measured $1\frac{1}{2}$ inches long. Growth was excised. Preauricular gland also excised. Wound healed by first intention. Patient became gradually weaker, and died from asthenia. P.M.—Liver studded throughout by a malignant deposit. Few nodules also in spleen. Kidneys cirrhotic. Growth was a round-celled sarcoma.

Cæcum.—Male, æt. 19. Operation for intussusception 1 year previously. Pain and tumour in abdomen 2 months previously. Abdomen distended. Tumour in right iliac region. Cœlotomy. Intestines found matted in right iliac fossa. Cæcum, 8 inches of ileum, and portion of ascending colon excised. End-to-end anastomosis of ileum and colon with Murphy's button. Constant vomiting after operation. Rectal feeding until 5th day after operation, when

milk was also given by the mouth. Wound suppurated. Fæcal discharge on 8th day after operation. Death 12th day after admission. P.M.—Adhesive peritonitis over right two thirds of abdomen. Loculi of pus. Line of junction of intestine separated at mesenteric border for ¾ inch. Murphy's button lay *in situ*. Growth of round-celled sarcoma in cæcum.

Lipoma.—Males 10, females 10. C. 18, U. 2. Shoulder 4; back 2; groin 3; buttock 2; chest 1; leg 1; axilla 1; thigh 4; lumbar 1; perinæum 1. Pendulous 2; fibro-lipoma 1. Excision in 18; not advised in 2.

Nævus.—Males 2, females 10. C. 11, R. 1. Mouth 1; occiput 1; back 4; chest 1; forehead 1; cheek 1; face 2; abdominal wall 1. Electrolysis 1; excision 10. Recurrent 2.

Duct papilloma.—Female, æt. 42. Married, 9 children. Watery, blood-stained discharge from left nipple for 2 years. Some pain. Small round hard body the size of a pea under the lower and inner part of areolar. Serous fluid can be pressed from nipple. Not tender or painful. Nipple not retracted. Removal of growth by radiating incision. Cyst contained papillomatous growth. Discharged cured on 19th day.

Female, æt. 58. Married, 8 children, Tumour in right breast for 6 weeks. No pain. No discharge from nipple. Small hard nodular tumour in upper and outer part of breast, evidently in breast tissue. Skin slightly adherent. Tumour connected with nipple, close up to which the growth extends and gives the sensation of fluid. Amputation of breast. Axilla cleared. No glands found. Discharged cured on 39th day. Tumour proved to be a cyst with papillomatous contents.

Submaxillary tumour.—Female, æt. 45. Removal. Tumour consisted of cartilage and gland tissue. Multiple lipoma of arm 1.

Fibro-adenoma of breast.—Females 7. C. 7. Removal in all.

Female, æt. 22. Enlargement of left breast 4 years previously after a blow. Breast strapped. Swelling almost subsided, and gave no trouble until 8 weeks ago, since when the breast has been painful and steadily enlarging. Breast 3 times as large as other organ. Uneven consistence. Skin not adherent. No attachment to deep structures. Some redness of skin. Measurement over surface 13 inches horizontally and 11 inches vertically. Removal by vertical incision. Encapsulated tumour situated behind breast. Microscopically a fibro-adenoma. Discharged cured on 41st day.

Sacro-coccygeal tumour.—Male, æt. 13 months. Large congenital tumour. Bilobed. Partly cystic. Irregular on surface. Extends between rectum and sacrum. No paralysis or other deformity.

Tuberculous granuloma of spermatic cord.—Male, æt. 2. Small hard tumour above and separate from testis. Considered to be a sarcoma on section. Castration with removal of tumour. Microscopic sections presented typical giant-celled systems of tubercle.

Fibro-myoma of uterus.—Female, æt. 35. Abdominal swelling 2 years. Operation. Tumour found to consist of intermural fibro-myoma. Broad ligaments ligatured and divided. Tumour removed by anterior and posterior flaps,

which were sutured together. Stump treated intra-peritoneally. Discharged on 61st day.

Cysts.

Dermoid.—Males 5, females 1. C. 6. Eye 2; floor of mouth 1; ear 1; mastoid 1; lower lip 1. Removal in all.

Multilocular cyst of neck.—Males 29. History 8 months. Situated at angle of jaw. Dissected out. Cavities filled with blood. Connected with the parotid, a portion of which was excised. Great vessels of neck not seen.

Fang cysts.—Male 1, female 1. C. 2.

1. Male, æt. 30. History 7 years. Canine tooth decayed. Alveolar border absorbed. Palate depressed. Cyst contained 2 oz. of clear fluid with cholesterine crystals.

2. Female, æt. 39. History 4 months. Lateral incisor decayed. Alveolar margin absorbed. Fluid clear.

Pancreatic cyst.—Female, æt. 35. Enlargement of abdomen 5 years. No history of abdominal injury. Large prominent globular tumour of abdomen, most of which is situated above the umbilicus. Surface presents irregularities. Margin well defined. Fluctuation obtainable. Band of resonance between tumour and symphysis. Tumour apparently not connected with pelvis. Cœliotomy. Tumour covered by peritoneum. Transverse colon closely connected with cyst. Peritoneum incised. Cyst partially shelled out. Tissue of pancreas found spread out over small portion of wall, inseparable from cyst. Redundant portion of cyst wall cut off and remainder stitched to abdominal wall. Good deal of discharge from pedicle, mostly greenish fluid. Discharged on 66th day.

Parovarian cyst.—Female, æt. 35. Twenty-six months previously right ovariotomy; 2 months previously cystic tumour on left side of uterus was tapped but not removed. Operation. Bowels adherent to anterior abdominal wall. Parovarian cyst was found deep in left side of pelvis. During manipulation cyst burst. Contents clear. Ovary could be felt from inside the cyst. Cyst wall stitched to abdominal incision. Drainage 11 days. Discharged on 39th day. Readmitted in 5 months, complaining of pelvic pain. Cystic swelling again found on left side of uterus. Cystitis. Discharged on 13th day.

Dermoid of Ovary.

1. Female, æt. 16. Attacks of retention 3 months. Pelvis occupied by hard smooth tumour. Ovariotomy. Removal of dermoid cyst of right ovary. Posterior wall of cyst adherent to pelvis. Some suppuration in wound. Discharged on 40th day.

2. Female, æt. 22. Pain in lumbo-sacral region 8 months. Increased frequency of micturition lately. Ovariotomy. No adhesions. Tumour contained long hair, cartilage, teeth, and a nipple-shaped prominence. Glass tube 24 hours. Little suppuration in inferior part of wound. Discharged on 47th day. Specimen in museum.

Ovarian cysts.—Females 11. C. 5, R. 2, U. 2, D. 2.

1. Female, æt. 18. Increase in size of abdomen 3 months. Ovariotomy. No adhesions on left side. Tumour consisted of one large cyst. Right ovary cystic, adherent; removed. Concretions found in vermiform appendix, which were

reduced into the bowel. Recovery good except for some cystitis. Discharged on 31st day.

2. Female, æt. 19. Tumour in abdomen 6 months. Ovariotomy. No adhesions. One large cyst and several small. Opposite ovary cystic. Wound suppurated. Considerable discharge. Drainage-tube 7 inches long inserted. Discharged on 84th day with sinus.

3. Female, æt. 48. Increase of abdomen 1 year. Ovariotomy. Adhesions on anterior surface of cyst with abdominal wall and omentum. Tumour consisted of one large cyst and several small ones. Large cyst contained greenish mucoid fluid. Uneventful recovery. Discharged on 23rd day. Tumour was one of the left ovary.

4. *Suppurating.*—Female, æt. 18. Pain in lower part of abdomen 2 days. Abdomen somewhat distended. Hard mass felt in right iliac fossa reaching to mid-line and almost to umbilicus. *Per vaginam* uterus pushed forwards, large mass in Douglas's pouch. Cœliotomy. Mass found to consist of matted intestines and suppurating ovarian cyst. This latter was removed along with both Fallopian tubes, which were much inflamed. Glass drainage-tube. On 3rd day after operation fæcal matter through tube. On 5th day simple enema administered, which came through abdominal wound. On 14th day large piece of sloughed intestinal wall passed. Fæcal fistula well established. Bowels act naturally also. Discharged with fæcal fistula on 116th day.

5. Female, æt. 53. Increase of abdomen 11 months. Cœliotomy. Adenoma of left ovary removed. Small cyst on right side of pelvis behind broad ligament. Adhesions. Removal of cyst with portion of right Fallopian tube. Uneventful recovery. Discharged on 35th day.

6. Female, æt. 37. Increase in size of abdomen for 2 years. Attacks of abdominal pain a little time previous to admission. Cœliotomy. No adhesions. Removal of multilocular cystic adenomata of both ovaries. Uneventful recovery. Discharged on 32nd day.

7. Female, æt. 43. Enlargement of abdomen 9 months. Cœliotomy. No adhesions. Right side of tumour removed. Cyst was multilocular, consisting of 3 or 4 large cysts and numerous small ones. Uneventful recovery. Discharged on 62nd day.

Fatal cases.

1. Female, æt. 46. Increase in size of abdomen for 6 months. Some attacks of abdominal pain. Ovariotomy. On opening abdomen considerable amount of fluid escaped. No adhesions. Tumour was multilocular, and in one of the posterior cysts was a round hole with smooth edges. This was apparently a spontaneous opening through which the contents of the cyst had escaped into the abdomen. After the operation the temperature rose gradually to 104°, and there was constant vomiting. Death on 22nd day. P.M.—General septic peritonitis; a pint of blood-stained fluid in the abdomen. Moderate degree of injection in the intestinal coils all over the abdomen. Right ovary healthy. Ligature on pedicle *in situ.*

2. Female, æt. 63. Seven weeks previously swelling of left leg. Abdomen prominent in lower part. Hard irregular tumour reaching from umbilicus to symphysis and extending out almost to anterior superior spine on either side.

Œdema of leg diminished. Discharged on 17th day. Readmitted in 7 months. Both legs swollen. Micturition frequent. Tumour now extends almost to xiphisternum, very prominent between pubes and umbilicus. Thrill to be obtained over upper part of tumour; this is apparently fluid. Cœliotomy. Large cystic swelling tapped; 36 pints of fluid withdrawn. Many adhesions. Firm connection with posterior part of large uterine fibroid; pedicle felt below, and proved to be the elongated cervix uteri. This was cut through, and the tumour removed. Stump treated extra-peritoneally. Drainage-tube inserted, and wound closed. Temperature rose to 101·6°. Abdomen distended, tender. Vomiting, collapse, and death on 20th day. P.M.—General peritonitis. Thick yellow lymph on intestines. Cervical canal found opening into abdominal cavity; was apparently the cause of peritonitis. Lungs: pleuritic adhesions at both apices; base of right lung collapsed.

DUCTLESS GLANDS.

Bronchocele, parenchymatous.—Males 2, females 2. R. 1, U. 2, D. 1. 1 Readmission.

Fatal case.—Male, æt. 15. Enlargement noticed 12 months, during which time patient had some difficulty of breathing. Stridor noticed 14 days. History of dyspnœa at night. Uniform soft enlargement of lateral lobes. Stridor became more marked, and attacks of nocturnal dyspnœa occurred while in hospital. Median incision. Isthmus narrow. Removal of isthmus and part of left lobe. Severe dyspnœa during operation. Wound sutured. Difficulty of breathing same night. Tracheotomy. Great shock. Death on 2nd day after operation. P.M.—Tissues around gland greatly infiltrated with blood, which extended short way into anterior mediastinum. Trachea keel-shaped. Nerves intact. Tracheal mucous membrane intensely injected. Epiglottis and arytænoid folds œdematous.

Adenoma of thyroid.—Females 7. C. 5, R. 1, U. 1. Readmission 1. Right 4; left 3. Excision in 5. Tumour encapsuled and easily shelled out. Stridor in 1. Trachea flattened 1.

Multilobular enlargement.—Female 1. U. 1.

Tumour large, reached from inferior maxilla to clavicles. Both lobes and isthmus enlarged. Deep sulci between isthmus and lobes. Surface nodular and hard. Slight stridor. To come in again for removal.

Cyst of isthmus.—Female 1. C. 1.

Removal. Cyst shelled out easily.

VASCULAR SYSTEM.

Varicose veins.—Males 52, females 22. C. 67, R. 3, U. 4.

Right leg 19; left leg 23. Double 32. Ruptured 3. Thrombosis 3. Excision in 64 cases. Ligature of internal saphenous vein 1; exostosis of tibia 1; eczema 1; ulcers 5; hammer-toe 1; erysipelas 1; pyæmia 1; candidates for public service 15.

Gangrene.

Traumatic gangrene.—Male, æt. 26. Five days previously barrel fell on patient's foot. Compound fracture of proximal phalanges of 1st, 2nd, 3rd, and 4th toes. Gangrene supervened, and patient admitted. Amputation of affected toes. Discharged cured on 22nd day.

Septic traumatic.—Male, æt. 63. Fourteen days previously kicked by a horse. Seat of injury became red and œdematous and swelling extended up to thigh. Leg and thigh greatly swollen. Gangrenous patch on anterior surface of leg. Temp. 102·6°. No defined edge to redness of thigh. Sugar in urine. Gangrene spreading. Amputation of thigh in upper third on 5th day. Death on 6th day. P.M.—General atheromatous disease of arteries. Other organs healthy.

Diabetic Gangrene.—Fatal case.—Male, æt. 65. Three months previously 2nd toe of right foot became blue after cutting corn. Gangrenous process extended to 3rd toe. Amputation of 2nd toe. Patient admitted. Arteries hard and tortuous. No pulsation in arteries of foot. Sugar in urine. Amputation through condyles of femur. Frequent vomiting after operation. Collapse and death on 5th day after operation. Sugar increased up to time of operation, but sank considerably afterwards. No rise of temperature up to time of operation, but slight rise afterwards. P.M.—General arterial disease. Extreme atheroma of aorta, with extensive secondary calcification. Femoral, radial, and anterior tibial arteries showed primary annular calcification. Muscular tissue of heart normal. Pancreas hard from excess of fibrous tissue.

Senile gangrene.—Females 2. U. 2. Toes in both cases. No sugar in either. Amputation refused. Ages 60 years and 70 years.

Frost-bite.—Male 1. C. 1. Male, æt. 45. Fingers of both hands affected. Left fingers most affected and presented boggy swellings and blebs, while skin on terminal phalanges was black. Right finger similarly but less severely affected. Sloughs separated under treatment, and patient left cured.

Raynaud's disease.—Female 1. C. 1. Female, æt. 43. Hands and feet cold in winter. Chilblains. Great pain if hands are warmed by fire when cold. Skin of 3rd left toe became black 12 days before admission. Sloughs separated under treatment. Discharged cured.

Cause undetermined.—Females 2, males 2. C. 2, R. 1, D. 1.

1. Female, æt. 24. Lobule of ear became gangrenous. Sloughs separated.

2. Female, æt. 30. Dry gangrene of 2 terminal phalanges of left index. Line of demarcation. Amputation at metacarpo-phalangeal joint.

3. Male, æt. 65. Scrotum swollen and tensely distended, and gave off a foul smell. Skin darkly discoloured. Incisions. Sloughs separated. No stricture. No albumen or sugar in urine. Discharged with granulating surface on 47th day.

4. Male, æt. 38. Three days' history. Scrotum greatly swollen black and gangrenous. Incisions. Temp. 102° F. General condition bad. Redness in both groins and œdema in perinæum. No stricture. Large trace of albumen. Patient sank and died on 5th day. P.M.—Urethra healthy. Bladder mucous membrane slightly injected. Calcareous nodules at left apex. No other disease.

Hæmorrhage from umbilicus.—Male 1. D. 1. Male, æt. 3 weeks. Bleeding commenced spontaneously. No bleeding point seen. Umbilicus sewn up with silk. Bleeding continued. Death in 24 hours. P.M.—Tissues around umbilicus infiltrated with blood. Body anæmic. Large vein found patent in abdominal wall behind umbilicus. Broncho-pneumonia in lower lobe of right lung. Patent ductus venosus communicated with patent vein at umbilicus. All blood in body in fluid state. Left lobe of liver contained venous angeioma.

Aneurism.

Traumatic.—Males 3. C. 3.

1. Male, æt. 15. Incised wound of first interosseous space 7 days previously Hæmorrhage stopped by pressure. Profuse hæmorrhage from wound. Admitted. Antiseptic dressing applied as bleeding had ceased. Fifth day, pulsation noticed in wound, but disappeared in 4 days. Thirtieth day, pulsation again visible and small dark red swelling appeared. Excision of aneurism. Radial artery and branches to thumb and index found communicating, ligatured. Discharged cured on 58th day.

2. Male, æt. 60. Cellulitis of wrist and thumb (right). Incisions in forearm over radius. Twenty-fourth day, pulsation over radius noticed, the wounds being completely healed. Rapid increase in size of aneurism. Rupture on 26th day. Sac dissected out and radial artery ligatured above and below. Aneurism was the size of large walnut. Discharged cured on 44th day.

3. Male, æt. 17. Cut wrist some days previously. Wound sutured. Suppuration. Sudden attack of hæmorrhage. Admitted to hospital. Ragged wound over inner and lower part of wrist on anterior aspect. Small aneurism of ulnar artery seen pulsating at bottom. Excision of aneurism on 2nd day. Ligature of ulnar artery above and below. Discharged cured on 7th day.

Popliteal; ligation in continuity.—Male, æt. 33. Postman. Syphilis 6 years previously. Eight weeks ago right knee became stiff and painful, and pulsation was noticed. Treated by complete rest and compression of the femoral artery. Treatment caused great pain, and was abandoned and patient sent to hospital. Tense pulsating swelling in popliteal space, tender, skin red, knee slightly flexed. Femoral artery ligatured at apex of Scarpa's triangle. Dissection difficult owing to matting of parts by pressure previously applied. Goldbeaters' skin used as ligatures, two strands being applied to produce stay-knot. No recurrence of pulsation. Patient discharged on 55th day with movable knee. Tumour smaller in size, hard and free from pain.

Varicocele.—Males 45. C. 43, U. 3. Left 44, double 1. Previous operation on right 1. Candidate for public service 24. Excision of veins 32; subcutaneous ligature 11; nil 3; skin excised 1; suture of rings 1. Orchitis 2; epididymitis 1.

LYMPHATIC SYSTEM.

Macroglossia.—Female, æt. 16. Tongue became enlarged for the first time when patient was 3 years old, when it protruded from the mouth. Since that date the tongue has protruded from the mouth on several occasions. On admission, anæmia. Portion of tongue protruded forms a mass 3½ inches long, 3 inches across, and 2 inches in thickness. Surface studded with vesicles and

black spots. Saliva dribbles from mouth. Tongue tender. Teeth not displaced. Occasional fever. Removal of anterior two thirds of tongue by V-shaped incision. Edges sutured with silk. Some of growth was left behind as it extended so far posteriorly. Progress good. After operation it was found that though the teeth met behind when jaws were closed the anterior teeth would not approximate, due to failure of development of alveolar border. Microscopic sections of tongue showed structure of lymphatic nævus. Discharged cured on 84th day.

DIGESTIVE SYSTEM.

Paralysis of bowel after hernia.—Male, æt. 21. Hernia reduced 6 days previously. Purge, taken 4 days before admission, followed by great pain and vomiting, which continued up to admission. Abdomen distended and immobile on respiration. Dulness in flanks. Abdomen opened in mid line. Portion of small bowel involved in hernia presented at once, below which small intestine completely collapsed, the bowel being paralysed at seat of stricture. Above, the gut was distended with fæcal matter. Paul's tube tied in laterally, wound closed. Patient quickly sank and died. P.M.—Paul's tube inserted 30 inches from cæcum. Immediately above this the gut had been acutely strangulated and walls showed signs of extravasation of blood. No perforation. Lungs congested. Kidneys subject of interstitial nephritis. Right inguinal canal dilated.

Recurrent appendicitis.—1. Male, æt. 36. Recurrent appendicitis for 5 months previous to admission. Hard irregular mass in right iliac fossa. Incision parallel to Poupart's ligament. Peritoneum adherent. Wound closed. Incision in right semilunar line. Appendix found hard and enlarged, and adherent to cæcum and iliac fossa. Amputated, and stump inverted into cæcum and retained by Lembert's sutures. Drainage-tube inserted and wound closed. External wound suppurated, but both granulated up subsequently. On 47th day temperature rose to 102° F. Abscess in lumbar region opened and drained. Found to communicate with iliac wounds. Drainage. Patient discharged on the 133rd day with lumbar and iliac sinuses.

2. Male, æt. 32. Recurrent appendicitis 2½ years. Tumour in right iliac region 3 by 5 inches. Tender. Abscess incised and drained. Strong fæcal odour perceived on opening abscess. Abscess continued to discharge fæcal-smelling matter. Fortieth day, abscess opened up. Opening into cæcum found. Fit of coughing broke down adhesions and omentum presented. Omentum ligatured and removed. Opening in cæcum sutured. Several loculi of abscess opened up. Abdominal wall sutured in layers. Glass drainage-tube inserted. Pus found beneath sutured wound. Stitches removed. Fæcal smell perceived. Wound opened up freely. Subsequent healing by granulation. Discharged cured on 94th day.

Appendicitis; suppurative peritonitis.—Female, æt. 53. Sudden attack of vomiting, fæcal, 3 days; complete constipation 5 days. Slight swelling in right iliac region noticed 3 days. Patient evidently very ill. Cœliotomy. General suppurative peritonitis. Abdomen irigated, closed. Death on 2nd day. P.M.—Intense general peritonitis. Necrotic flakes of lymph on intestines, which were black in places. Small gut distended throughout. Vermiform appendix

measured 3½ inches, and hung free in pelvic cavity. Mucous lining for first inch was healthy. The next inch of organ was represented by narrow band which was sloughing. The terminal portion was in a gangrenous condition, and perforated at extreme end. No concretion found.

Artificial anus; end-to-end anastomosis.—Female, æt. 48. Resection of gut for carcinoma of sigmoid flexure 5 months previously. Artificial anus. Attempted anastomosis 3 months previously abandoned because patient collapsed under anæsthetic and the rectum was found too short to draw into wound for lateral suture of intestine. Incontinence of fæces form a great source of inconvenience to patient. Operation. Attemped extra-peritoneal suture, abandoned as it was found impossible to properly free bowel without cutting into lumen. Abdomen opened. Bowel freed. Ends freshened. End-to-end approximation by sutures that included muscular and submucous tissue only and then by a row of Lembert sutures not including mucous membrane. Wound closed. Olive-oil enema followed by action of bowels on 12th day after operation. Discharged cured on 44th day from admission.

Biliary fistula.—Female, æt. 40. Cholecystotomy 6 months previously; 60—70 facetted stones extracted. Biliary fistula. Scar of old operation with pinhole fistula discharging bile. Fæces contain bile. Opening enlarged. Gall-bladder explored. No stone found. Irrigation. Edges of gall-bladder freshened, and wound closed by silkworm-gut and horse-hair sutures. Day after operation dressings soaked with bile. Temp. 102° F. Slight jaundice. Seventh day after operation wound opened and discharged quantities of bile. Temperature normal. Thirteenth day after operation bile ceased to be discharged. Wound approximated with strapping. Discharged on 45th day after operation with wound closed. Fistula opened again after discharge from hospital.

Gall-stones; cholecystotomy.—Females 2. C. 2.

1. Female, æt. 34. Pain above umbilicus 2 years. Tumour beneath right costal margin 1 year. Recurrent attacks of vomiting. Abdomen rigid. Tender tumour below 8th and 9th ribs on right side; size of hen's egg; apparently cystic. No bile in urine. Abdomen opened in right semilunar line. Gall-bladder presented. Several ounces of clear thick fluid withdrawn. Incision. Twenty-four stones removed. Two stones felt impacted in cystic duct, incapable of removal. Duct hooked down by finger. Stones necelled. Portion of proximal one removed. Walls of gall-bladder sutured to belly wall. Lower part of abdominal wound closed. Tube in gall-bladder. Fifth day after operation tube removed and found choked with débris of stones. Small fragment passed *per rectum* on 13th day. Pieces of calculi were discharged or removed up to 27th day, when dressings were found bile-stained. Tube removed on 31st day. Discharged on 56th day with fistula.

2. Female, æt. 56. History of attacks of hepatic colic for 6 years, there being 5 attacks before admission. Admitted with 6th attack. Paroxysms every few minutes. No jaundice. No bile in urine. Fæces rather light in colour. Distinct, dull, tender tumour in right hypochondrium on level with umbilicus. Movable on respiration. Band of resonance between it and the ribs. Abdomen flaccid. Abdomen opened in right seminular line. Gall-bladder presented. Half an ounce of thick greenish fluid removed with trocar. Incised; wall ¼ inch

thick. Eighty-three small stones evacuated, two larger ones removed with forceps. Irrigation of gall-bladder. Edges stitched to skin. Abdominal incision closed elsewhere. Drainage of gall-bladder. Progress good. Bile in stools, and none in urine or by wound, which discharged only muco-pus when patient left hospital on 30th day.

GENITO-URINARY SYSTEM.

Stricture.—Males 18. C. 17, U. 1. Left at own request. History of gonorrhœa 13, trauma 1.

Situation.—Penile 7; penile and bulbous 2; bulbous 8; multiple 1; not stated 2.

Complications.—Pyæmia 1; cystitis 2; enlarged prostate 1; abscess 3; rigors 4; extravasation of urine 1.

Treatment.—Dilatation 10; incision of abscess 3; external urethrotomy 6; internal urethrotomy 1.

Retention.—Males 20. C. 16, R. 1, D. 3. Stricture 18; multiple stricture 1.

Complications.—Uræmia 1; delirium 1; suppression of urine 1; gonorrhœa 1; prostatitis 1.

Treatment.—Catheter 16; supra-pubic cystotomy 1; supra-pubic puncture 1 external urethrotomy 2.

Fatal cases.

1. Male, æt. 45. Urethritis 18 months previously. Stream smaller 1 year. Admitted with retention. Passage of catheter caused much bleeding, and it did not enter bladder. Warm bath. Natural micturition. Delirium and suppression of urine. Rigors. Death on 3rd day. P.M.—Fibrous stricture at junction of membranous and bulbous urethra. Prostatic urethra dilated. Some hypertrophy of bladder, extensive ulceration about trigone. Mucous membrane gangrenous. Early dilatation of pelvis of kidneys. Cortex thin, and gorged with blood. Three minute abscesses in cortex of left kidney. Spleen diffluent. General hypostatic congestion of lungs. Left ventricle hypertrophied. General hyperæmia of brain substance.

2. Male, æt. 49. Admitted comatose. Catheter (No. 2 silver) passed, ¾ pint of turbid bloody urine drawn off. Bleeding to 18 oz., and pilocarpine injected. Some improvement after bleeding, but never regained consciousness. Death in 20 hours. P.M.—Dense fibrous stricture 3 inches from bladder. False passage. Bladder dilated and hypertrophied. Mucous membrane ulcerated. Intense injection of kidneys. Cortex somewhat narrowed. Emphysema in both lungs.

3. Male, æt. 75. Admitted comatose. Bladder much distended. External urethrotomy. Dense fibrous stricture. Multiple abscesses near prostate. Catheter passed into bladder. Patient continued delirious, and died on 4th day. P.M.—Bladder dilated and hypertrophied. Prostate enlarged, especially lateral lobes, but did not appear as if the cause of condition of bladder. Kidneys rather granular on surface. Ureters normal. Upper lobe and part of lower lobe of left lung in a state of pneumonic consolidation.

Extravasation of urine.—Males 2. C. 1, D. 1.

Male, æt. 35. Stricture 5 years. Admitted with retention and large fluctuating swelling in perinæum. Three strictures found. Stricture in bulb would not admit

No. 2 catheter. External urethrotomy. Foul pus evacuated. Urethra opened. Catheter passed into bladder through penis. Dilatation with steel sounds subsequently. Extravasation of urine again on 39th day. Penis and scrotum greatly swollen. External urethrotomy again; subsequent dilatation by steel sounds. Discharged cured on 109th day.

Fatal case.—Male, æt. 44. Admitted semi-comatose. History of previous stricture. Scrotum and penis swollen, as were also lower part of abdomen and flanks. Great collapse. Stricture 4 inches from meatus. Urethra opened in perinæum. Multiple incisions. Patient did not rally. Death in 15 hours. P.M.—Kidneys large but not otherwise abnormal. Lungs œdematous.

Enlarged prostate.—Males 5. R. 2, U. 2, D. 1. Cystitis 4; hæmaturia 1; probably malignant 1. *Treatment.*—Catheter; supra-pubic cystotomy 1.

Fatal case.—Male, æt. 73. Retention. Cystitis. Paralysis of bladder. Supra-pubic opening established on 4th day. Death from exhaustion on 8th day.

Cystitis.—Males 5, females 2. C. 1, R. 4, U. 2. Gonorrhœa 1; cause undetermined 6; previous calculus 1; previous supra-pubic 1. Irrigation 3; digital exploration 1.

Tuberculous cystitis.—Males 2, female 1. R. 3. Hæmaturia 1; previous castration for tubercular testis 1. Supra-pubic cystotomy 1; injection of iodoform 2; irrigation in all.

Hæmaturia.—Males 4, female 1. C. 1, R. 3, U. 1. Cystitis 2; enlarged prostate 1; bladder distended with blood 1; congenital malformation of urethra 1; supra-pubic opening established 1.

Supra-pubic fistula.—Males 3. C. 1, R. 1, U. 1. Previous supra-pubic cystotomy for stone 2; previous supra-pubic cystotomy for enlarged prostate 1.

Recto-vesical fistula.—Male, æt. 31. Lateral lithotomy for calculus when 10 years old. Kick from horse 3 years previously, since when fistula in old scar. Probe passed from perinæum into prostate and thence into bladder and rectum. Nothing advised.

Recto-urethral fistula.—Male, æt. 45. Fistula in ano slit up 8 months previously. Urine from rectum 6 weeks. Catheter tied in. Bladder irrigated. Not improved.

Renal fistula.—Males 2. C. 2. Male, æt. 41. Exploration of kidney (left) 5 years previously for renal colic. Fœtid pus evacuated but no stone found. Urinary fistula ever since. Tumour felt in left lumbar region. Amount of urine daily from bladder averaged 24 oz. Excision of left kidney through loin. The organ was very rotten, and came away piecemeal. Capsule of kidney left *in situ*. Three stones also removed. Two larger measured ½ inch in long diameter, and were of dark colour with whitish spots on surface. Smallest stone was of a yellow colour. Some collapse after operation. Discharged on 44th day.

Vesical calculus.—Males 9. C. 8, D. 1.

1. Male, æt. 72. Symptoms 7 months. Supra-pubic cystotomy. Stone discoidal and measured $1\frac{1}{2} \times 1 \times \frac{1}{2}$ inches. Weight 3 drachms 34 grains. Uric acid

externally. Tube in bladder 10 days. All urine through penis on discharge on 28th day.

2. Male, æt. 50. Symptoms 3 months. Stricture of urethra. Two stones ½ inch in diameter. Crushed with small lithotrite. Evacuator used. Stricture dilated. Discharged on 20th day.

3. Male, æt. 8. Stone measured with lithorite. Supra-pubic cystotomy. Oxalate calculus weighing 41½ grains extracted. Bladder sutured with 7 Lembert's sutures. Wound subsequently broke down. Bladder drained through supra-pubic opening. Discharged with wound healed on 42nd day.

4. Male, æt. 57. Removal of 2 stones by supra-pubic cystotomy 9 months previously. Symptoms returned 4 months ago. Lithotrity. Stones, mostly phosphates, weighed 240 grains. Discharged cured in 18 days. After leaving hospital 14 days passed a small stone *per urethram*. Symptoms recurred, and patient was again admitted after 5 months. Lithotrity. Stone measured 1½ inches, and was of same consistence as last. Discharged on 22nd day.

5. Male, æt. 66. Symptoms 5 months. Prostrate enlarged. Supra-pubic cystotomy. Six small stones and one large one removed. All were facetted. Small projection from middle lobe of prostate excised. Bladder drained through wound. Patient required catheter on account of prostate. Supra-pubic wound still discharging urine when patient left on 32nd day.

6. Male, æt. 4. Symptoms of stone 5 months. Retention 24 hours. Bladder distended. Catheter passed. Urine very thick and ran slowly. Temperature somewhat raised. Supra-pubic cystotomy. Bladder was sacculated, and presented a large pouch on anterior surface. No stone found, but bladder contained large quantity of cheesy matter. Supra-pubic drainage. Continuous bath for 7 days. Irrigation of bladder. No urine through penis. Urine still offensive. Cystotomy wound enlarged. Bladder explored. Four stones extracted, largest ¾ inch in diameter. Continuous bath. Supra-pubic drainage discontinued on 17th day after extraction of stones. Discharged with supra-pubic wound healed on 135th day.

Renal calculus.—Fatal case.—Male, æt. 36. Vesical calculus removed 9 years previously. History of pain in groins and hypogastrium, and of foul-smelling urine, which contained, on admission, blood, pus, and albumen. No tenderness or tumour to be felt in either loin. Irrigation of bladder. Urine continued alkaline and foul. Albumen ⅓ present. Amount of urine became gradually less, and patient died of suppression on 18th day. P.M.—Right kidney contained branching calculus that extended into the calices, and one projection of which blocked the ureter. This latter was somewhat dilated. Kidney substance somewhat thinned, but normal in structure. Left kidney contained number of small calculi which entirely filled the pelvis. Bladder contained turbid ammoniacal fluid. No calculus present. Mucous membrane dotted with number of small cyst-like bodies.

Renal lithiasis.—Female, æt. 44. Two years' history of painful micturition and pain in lumbar and iliac regions. History of passage of a small stone 8 months previously. There was tenderness but no tumour in left lumbar region. Urine offensive, acid, trace of albumen. Left lumbar nephrotomy. Some putty-like material found in pelvis of kidney with gritty particles in it. Irrigation. Wound partially closed and plugged. Great collapse. Infusion of 4 pints of

normal saline. Wound gradually closed to a urinary fistula. Exploration of fistula; nothing found. Discharged on 86th day with fistula in loin. Material from kidney was found to consist of organic matter and some calcium phosphate.

Pyonephrosis.—Male 1, females 2. C. 1, U. 1, D. 1.

Female, æt. 43. Pain in loin (right) some months. Swelling in right loin 2 months. Fluctuating swelling in right loin with rounded margins. Tumour aspirated. Pus withdrawn. Temperature rose rapidly. Right lumbar nephrectomy performed. Ureter greatly dilated and left in external wound. Good recovery. Discharged with sinus on 57th day.

Fatal case.—Male, æt. 43. Three weeks' history of renal colic. Pressure in right loin causes great pain. Urine contained pus and albumen and blood. Nephrotomy. Ten ounces of pus evacuated. No stone felt. Kidney greatly dilated. Drainage. Patient progressed well. Albumen and blood continued in urine. Considerable pain in region of bladder. Painful micturition. Abdominal exploration. Both kidneys enlarged. Right ureter was hard, but no stone found. Bladder sounded; nothing found. Collapse after operation from which patient did not entirely recover and died on 5th day after abdominal exploration. P.M.—General septic peritonitis. Right kidney dilated and showed signs of interstitial change. Pelvis showed acute inflammation. Left kidney presented signs of tubal nephritis. No sign of tubercle in body. No stone. No stricture.

Tuberculous kidney.—Fatal case.—Male, æt. 23. Swelling in right loin 6 weeks. Renal colic and blood in urine for some time. Abscess opened in loin and explored. Large quantity of yellow pus evacuated. Nothing found to account for abscess. Wound left open. Rigor and temperature of 105·8° on 6th day after operation. Further exploration of wound on 25th day after first operation. Pleura accidentally opened; opening plugged with gauze. Abscess appeared to extend under diaphragm. Localised empyema resulted. Temperature fell after operation, and patient left for convalescent home, with small sinus in loin, on 66th day. Readmitted in 28 days. Considerable emaciation. Dulness over lower lobe of left lung. Temperature a little raised. Slight discharge from sinus. Patient slowly sank, and died on 43rd day. P.M.—Right lung adherent all over. Signs of tubercle at both apices. Right lung somewhat carnified. Early lardaceous liver. Pyramids of right kidney converted into caseous masses. Pelvis unopened by abscess. Prostrate enlarged, and contained tuberculous mass in centre.

Hydrocele of tunica vaginalis.—Males 12. C. 10, U. 1, D. 1. Left at own request 1; incision and drainage 2; partial excision 2; partial excision and drainage 5; injection of carbolic acid 1.

Fatal case—Male, æt. 8 months. Double hydrocele. High temperature and diarrhœa. P.M.—Excess of subarachnoid fluid. No distention of ventricles. Patches of collapse in both lungs.

Undescended testis.—Males 4. C. 3, U. 1. Excised 1; sewn into scrotum 1; epipidymis isolated 1; pillars sutured 1.

Gummatous orchitis.—Males 5. C. 2, R. 2, U. 1. Left at own request 1. Ulceration of scrotum 1; hernia testis 1; sinus 1. Excision 2.

Tuberculous testis.—Males 4. C. 3, R. 1. Excision of testis 3. Old disease of opposite testis 1; previous excision of opposite testis 1; vas tuberculous at point of section 1.

Chronic interstitial mastitis.—Females 5. C. 5. Cysts in all; double 1. Amputation of breast 4; excision of cyst 1.

Pyosalpinx.—Fatal case.—Female, æt. 21. History of pain in left side of 3 years' duration. Operation for pyosalpinx 30 months previously. Sinus in abdomen from date of operation. On admission, patient complained of pain in left side of pelvis. Cœliotomy. Old sinus followed down into recto-vesical pouch, being adherent to bladder, cæcum, and vermiform appendix. Adhesions separated. Both ovaries and Fallopian tubes removed. Tumour contained caseous matter and numerous small cysts. Some slight temperature after operation. On 4th day after operation patient became collapsed, and died on the 7th day after operation. P.M.—General suppurative peritonitis. Remains of abscess cavity with rugged walls situated in left posterior quadrant of pelvis. No actual obstruction found. No tubercle found.

ARTICULAR SYSTEM.

Tuberculous shoulder.—Male 1, females 4. Right 3, left 2. Excision 1; arthrectomy 2; incision of abscess 1. Abscess of arm 1; caries of anterior superior spine 1; sinus 1.

Tuberculous elbow.—Males 10, females 4. C. 3, R. 10, U. 1. Left 4, right 10. Trauma in 3; history of tubercle in 4; phthisis 1; previous arthrectomy 1; tuberculous knee 1; ankylosis of hip, 1. Excision 5; partial excision 1; arthrectomy 2; amputation of arm 2.

Hip—

Tuberculous arthritis.—Males 19, females 12. C. 4, R. 27. Right 13, left 18. Fracture of femur 1; thrombosis of femoral vein 1; sinus 1; tuberculous knee 1; pathological dislocation 1.

Treatment.—Anterior excision 5; incision and irrigation 3; straightened and plaster splint 2; extension and Thomas' splint 9; extension 6; Thomas' splint 3.

Ankylosis.—Males 10, females 8. C. 8, R. 9, D. 1. History of trauma 1, arthritis 16; unknown 1. Fibrous 7; osseous 10: double 1.

Treatment.—Subtrochanteric osteotomy 8; plaster splint 2; apparatus 3; V-shaped division of neck 1; amputation at hip 1; abscess incised 1; sinus scraped 1.

Fatal case.—Male, æt. 22. Hip disease 14 years previously. Lordosis. Trochanter above Nelaton's line. Complete ankylosis. Wasting of thigh. Temperature rose to 103·2° F. on 8th day. No signs in lungs. Coma and death on 10th day. P.M.—Skin dark, but no patches. No pigmentation in mucous membranes. Obsolete tubercle in apex of right lung. Scars in left apex. Supra-renals entirely replaced by caseous matter.

Knee—

Tuberculous arthritis.—Males 18, females 9. C. 9, R. 16, U. 2. Family history of phthisis in 5, and history of trauma in 6. Right 13, left 14. Previous

osteotomy for genu valgum 1; previous excision of knee 2; senile tuberculosis 1.

Treatment.—Excision 7; excision followed by re-excision followed by amputatation 1; amputation of thigh 5; leather splint 1; wool splint 1; plaster splint 10; nil 2.

Suppurative arthritis.—Males 2. C. 1, D. 1. Superficial wound 1. Incision, irrigation, and drainage in both. Went out in plaster splint 1.

Fatal case.—Male, æt. 10 months. Three months previously right knee swelled. Synovitis diagnosed and treated with Hyd. c̄ Cretâ and Lot. Plumbi. Knee did well until day before admission, when child became suddenly ill. Incision into joint on following day. Purulent fluid evacuated. Drainage. Progress good until 17th day, when erysipelus arose from sinus and extended over lower limbs, back, and abdomen. Death on 25th day. No P.M.

Loose body in knee.—Males 6, female 1. C. 5, U. 2. Extraction in 5; articular cartilage 2; quiet necrosis 2; articular fringe bodies 3, which contained in 2 cases cartilage, and fibrous tissue in 1 case.

Ankylosis of knee.—Males 5, females 2. C. 3, R. 3, U. 1. Right 5, left 2. Osseous 4; fibrous 3. Erysipelas 1.

Causation.—Penetrating wound 1; trauma 1; arthritis 5; previous arthrectomy 4.

Treatment.—Wedge excision 3; anæsthetic and plaster splint 1; extension 1; passive movement 1.

Ankle.—Tuberculous arthritis.—Males 8, females 5. C. 4, R. 9. Previous arthrectomy 1; lupus of face; old empyema 1; caries of ulna 1; rhinitis 1; sinus 2; family history of phthisis 2.

Treatment.—Syme's amputation 2; amputation in lower third of leg 2; arthrectomy by anterior incision 2; arthrectomy by multiple incisions 2; sinus scraped 2; excision of astragalus 2; plaster-of-Paris splints.

Tarsus.—Tuberculous arthritis.—Males 2, females 2. C. 2, R. 4. Family history of phthisis 1; history of trauma 2; Syme's amputation 2; sinus scraped 2.

SUMMARY OF INJURIES.

GENERAL INJURIES.

Burns.—Males 32, females 35. C. 45, R. 3, D. 19.

Situation.—Head, neck, and arms 5; abdomen and thighs 3; face and upper extremity 15; arm and thorax 1; trunk and lower extremity 3; face 4; upper extremity 10; abdomen and chest 1; face, trunk, and arms 4; scalp and neck 2; trunk and extremities 8; all extremities 2; head, neck, trunk, and arms 1; scalp, neck, and arms 2; buttocks, thighs, and genitals 1; face and trunk 1 chest and arms 1; face and neck 1; buttocks and thighs 1; back 1.

Causation.—Lamp explosion 5; gas explosion 2; boiling pitch 1; fall into fire 5; electric 1; lamp upset 4; gas explosion in sewer 1; petroleum on fire 1; gunpowder 1; house on fire 1; hair ignited 2; clothing ignited 33; remainder not stated.

Treatment.—Vaseline 3; boracic bath 17; hot lotions 22; boracic ointment 9; Thiersch grafts 3; plastic 1; iodoform 1; Leiter's tubes 1; tracheotomy 1; remainder not stated.

Fatal cases.—Under 24 hours:—Males æt. 11 months; 4 years 2; 4½ years 1; 22 years 1. Females æt. 2½ years 1; 4 years 1; 2½ years 1; 26 years 1. Over 24 hours:—Males æt. 17 months 1; 6 months 1; 9 years 1. Diarrhœa 1; diarrhœa and bronchitis 1. Females æt. 3½ years; 11 years; 21 years; 50 years. Temp. 108·8 1°; obstinate vomiting 1.

1. Male, æt. 46. Trunk and limbs up to third degree. Great shock. P.M.—All organs decomposed, but otherwise normal.

2. Male, æt. 3. Arms, face, and neck. Great shock. P.M.—All viscera much congested, stomach and duodenum normal otherwise. Dura mater adherent to frontal convolutions, which were wasted. Brain generally hyperæmic.

3. Male, æt. 3. Died in Casualty. Deep burns of thorax, scalp, and arms. P.M.—Organs normal.

Scalds.—Males 23, females 23. C. 36, D. 10.

Situation.—Head and upper extremity 7; neck and thorax 4; thigh 1; abdomen and lower extremities 3; neck 1; head, arm, and trunk 1; upper extremity 6; head and neck 2; partial of trunk 7; pharynx 3; lower extremity 3; chest and arm 3; trunk and limbs 1; back and thighs 1; back and arms 1; trunk and upper extremity 1; not stated 1.

Cause.—Boiling water 18; hot tea 16; hot gruel 1; boiling milk 1; drinking from kettle 3; remainder not stated.

Treatment.—Boracic bath 8; hot lotions 18; vaseline 1; Leiter's tubes 1; iodoform ointment 1; boracic ointment 4; Ung. Zinci 1; tracheotomy 1.

Fatal cases.—Under 24 hours:—Males æt. 16 months; 20 months; 15 months. Female æt. 8 years. Over 24 hours:—Males æt. 12 months; 8 months; 18 months.

1. Male, æt. 14 months. Scald of chest. P.M.—Patchy consolidation of lower lobe of each lung. Right kidney congenitally small, with wedge-shaped infarct of doubtful nature.

2. Female, æt. 3. Scald of neck, trunk, arms, legs. Boracic bath. Vomiting, diarrhœa. P.M.—Collapse of lower lobe of left lung due to broncho-pneumonia. Some collapse also in right lung. Other organs healthy.

3. Male, æt. 4. Drank boiling water. Dyspnœa necessitating tracheotomy. Death in 24 hours. P.M.—Collapse of lungs. Mucous membrane of pharynx and epiglottis grey and swollen.

LOCAL INJURIES.

HEAD.

Scalp wounds.—Males 38, females 12. C. 50.

Complications.—Bare bone 10; concussion 3; wounds of hand 1; contusion of face and eye 1; necrosis 1; amyotophic lateral sclerosis 1; scarlet fever 1; hæmorrhage 1; contusion of shoulder 1; injury of back 1; abrasion of knee; stabs of arm 1.

Concussions.—Males 80, females 19. C. 96, U. 1, D. 2.

Complications.—Scalp wounds 9; rigidity of neck 1; complete loss of memory as regards accident 1; rigid abdomen 2; hæmatoma of scalp 3; alcoholic coma 1; paresis of left arm 2; severe vomiting 6; contusion of face 2; rupture of tympanic membrane 1; left facial paralysis 1; twitchings of right side of face 1; headache 1; hæmorrhage from external meatus 1; retention 3; non-recovery of mental equilibrium 1; intermittent pulse 1.

Fatal cases.

1. Male æt. 44. Fall on head from dray. Unconscious 13 days. "Fits" on 2nd and 10th days. Admitted comatose. Left pupil dilated. Left external strabismus. Never regained consciousness. P.M.—Old, brownish, adherent clot beneath dura in anterior and middle fossæ on the left side. Origin of hæmorrhage was a vein in left temporo-sphenoidal lobe. Two small hæmorrhages in pons and another in tegmentum of right crus, also two in floor of 4th ventricle. Hæmorrhages into brain substance were recent.

2. Female æt. 35. Fall of 10 feet, 13 days previously. Regained senses soon after accident, and could speak rationally. Following day became incoherent and complained of severe headache. A day later again regained consciousness, but soon became delirious, and on 11th day from accident became completely comatose. When admitted, patient was semi-conscious. No paralysis or anæsthesia. Breathing noisy. Knee-jerks just present. Optic neuritis of both discs. Two days after admission left arm and leg flaccid and never move. Right knee-jerk not present. Evacuations passed unconsciously. P.M.—Adherent clot over left hemisphere; origin not found. Typical cerebral lungs. Liver cirrhotic. Granular change in both kidneys.

Fractures of vault of skull.

Simple.—Males 3, females 1. C. 1, D. 3.

Male, æt. 5. Fall 12 feet. Unconscious. Head turned to the left. Conjugate deviation of eyes to left. Convulsive movements of left side of face, trunk, and left upper and lower extremities. Hæmatoma over vertex of skull in parietal region. Operation. Flap of scalp raised. Fissure found running from 2 inches above right ear to 1 inch above the right orbit. Fissure gaped in parts to extent of $\frac{1}{8}$ inch. Skull chipped away with Hoffman's forceps. Clot found under bone running into frontal region. Clot removed with seeker and irrigation. Wound closed and dressed with cyanide. No recurrence of fits. Wound healed well.

Fatal cases.

1. Male, æt. 44. Fall from window on to head. Unconscious; stertorous breathing. Fits, 13 in number, of an epileptic nature, involving trunk and limbs. Temperature rose from admission until death, when it reached 108° F. Death in 42 hours. P.M.—Fracture of vault extending from torcular Herophili (left side) across superior longitudinal sinus to right jugular foramen. Sinus not wounded. Brain damaged by centre-coup. Anterior ends of frontal lobes severely lacerated and covered by layer of blood-clot $\frac{1}{4}$ inch deep. Adhesions in right pleura. Mixed tubal and interstitial nephritis in kidneys.

2. Male, æt. 60. Fall from van on to road. Admitted in dazed condition, restless. Vomiting. Rigidity of left arm and leg. Trephining over upper end of Rolandic fissure on right side was contemplated, but patient stopped breathing and died $6\frac{1}{2}$ hours after admission. P.M.—Effusion of blood beneath left temporal muscle, and beneath this linear fracture across groove for middle meningeal artery. Sutures at pterion started. Extra-dural blood-clot compressed left cerebral hemisphere in anterior two thirds. Small hæmorrhage over upper part of right ascending parietal convolution, and also in right frontal region. Streaky hæmorrhage in pons. Hæmorrhage also in medulla above calamus scriptorius. Aortic and mitral valves atheromatous. Lungs engorged.

3. Female, æt. 2. Fall from window. Unconscious. Vomiting. Great collapse. Puffy swelling in left frontal region. Pupils dilated. Conjunctival reflexes absent. No return of consciousness. Death in 7 hours. P.M.—Hæmatoma of face and scalp. Fracture of vault extending from $1\frac{1}{2}$ inches above right external auditory meatus to a point 2 inches above left external auditory meatus. Membranes and brain substance lacerated immediately below fracture. Slight meningeal hæmorrhage. Peritoneal cavity contained 1 pint of clotted blood. Spleen ruptured transversely about its centre.

Compound fractures of cranial vault.—Males 13, females 6. C. 13, D. 6. Fracture of external table only 4; fissure fracture 9; frontal region 8; occipital region 2; parietal 4.

Male, æt. 6. Fall on to piece of iron nail. Patient conscious. Small punctured wound at highest point of left temporal ridge. Operation. Flap of scalp raised. Small punctured wound in bone seen. This was followed down with gouge, when it was found to extend through the whole thickness of bone, but not to injure dura mater. Wound cleaned. Closed. Good recovery.

Fatal cases.

1. Male, æt. 21. Bullet wound of frontal bone 1 inch behind right external

anterior process. Unconscious. Scalp flap raised. Bone trephined with ½-inch trephine. Probe passed in 2 inches. Bullet not felt. Death in 24 hours P.M.—On removing the calvaria an extensive clot was found compressing anterior two thirds of left hemisphere. Bullet track traversed the two frontal lobes from right to left in a direction backwards and upwards. Point of entry was the under aspect of frontal lobe and the point of exit the posterior part of left frontal lobe, nearer the upper than the lower border. Dura mater clean cut. The bullet had rebounded from the inside of skull, and lay 1 inch behind its aperture of exit from the brain. Bullet was flattened.

2. Female, æt. 17. Bullet wound. Aperture of entrance was 1 inch above the exterior angular process of right frontal bone and ½ inch behind. Skin blackened. Patient unconscious. Occasional spasm of right arm. Right pupil dilated. Divergent squint of left eye down and out. Hæmorrhage from mouth. Trephining. Bullet wound removed in circle of bone, also some splinters of bone. Blood welled up from beneath bone. Patient became collapsed. Wound plugged. Death in 5 hours. P.M.—Intradural hæmorrhage over right hemisphere. Bullet had grooved great wing of sphenoid, just missed the brain, and entered orbit near apex. In orbit the 3rd nerve was bruised. Bullet passed into nasal fossæ. Hæmorrhage over pons Varolii. Organs normal.

3. Female, æt. 38. Run over by train. Compound fracture of left frontal bone over left frontal eminence. Scalp wounds. Compound comminuted fracture of phalanges and os calcis of left foot, with much stripping up of skin. Syme's amputation. Trephining over the linear fracture. No depression of internal table. Second day, complete paralysis of right 3rd nerve. Partial paralysis of 6th nerve. Delirium. Eighth day, some return of movement in internal rectus. Mental condition improved. Amputation flaps suppurating. Twenty-second day, third nerve not further improved. Sloughs in amputation flaps separated. Lymphangitis of left thigh. No optic neuritis. Twenty-ninth day, return of power in levator palpebræ, and internal rectus increased. Thirty-eighth day, return of power more marked in levator palpebræ, and all recti muscles can now be seen to act. Fifty-third day, rigor. Erysipelas of leg (left). High temperatures until death on 61st day. P.M.—Scalp wounds healed. Trephine hole edges smooth and rounded. No trace of fracture of skull was found. Membranes adherent under trephine hole. No injury found to cranial nerves. Fusiform dilatations of aorta near origin. Some atheroma on mitral valves. Small black specks found in peritoneum. Capsules of kidneys slightly adherent.

4. Female, æt. 56. Kitchen boiler exploded. Unconscious for 24 hours. Scalds of face and arms. Compound fracture of frontal bone. Scalp wounds. Wounds and scalds dressed. Second day, suppuration in scalp wounds. Delirium. Coma. Temperature rose to 107·4°. Death on 7th day. P.M.—Linear fracture of left frontal bone. Fissure started about 1½ inches above the inner part of left orbit and ran down and involved orbital plate. Septic meningitis of left hemisphere, which was itself softened. Other organs normal.

5. Male, æt. 40. Six weeks previously received blow on head. Went to Guy's Hospital, where he remained 3 weeks. Then went home until he came up to hospital and was admitted. Wound over left eyebrow discharging pus. Bare bone. Fracture felt of orbital margins. Erysipelas of face. Incision in left upper lid. Twelfth day, patient semi-conscious. Incision at root of nose. Pus

found. Bone bare. Eighteenth day, scalp reflected over frontal bone. Fracture ½ inch long found just internal to external angular process. Bone removed and pus found between dura mater and bone. Large area of bone removed. Skin flaps sutured. Slight improvement in mental condition, which continued up to 21st day, when patient became suddenly worse, with rise of temperature to 105° F. and difficulty of swallowing. Death on 21st day. P.M.—Edges of aperture in frontal bone rough and necrotic. Dura unopened, surface covered with granulations. Little lymph in left frontal region of brain. Vessels of pia injected over both frontal areas. Left frontal lobe felt like a water-pillow. Base normal. Large abscess in left frontal lobe containing 2 to 4 oz. Abscess wall smooth and evidently of some age, and in front was situated immediately under grey matter. Posterorly it reached to within ¼ inch of ventricle, which was undilated and contained clear fluid. Lungs and liver congested.

6. Male, æt. 34. Fall of 30 feet. Unconscious when admitted. Frontal scalp wound. Fracture of inferior maxilla near symphysis and at angle. Died within an hour of admission. P.M.—Thin layer of blood over right hemisphere beneath dura mater. Laceration of inferior surface of left frontal lobe. Fracture of cranial vault which extended across frontal bone midway between orbit and fronto-parietal suture. Obsolete tubercle at both apices.

Simple depressed fracture of skull.—Male 1, female 1. C. 1, D. 1.

Female, æt. 1. Blow on head by piece of coal. Depression at posterior inferior angle of right parietal bone. No symptoms. Discharged cured in 4 days.

Fatal case.—Male, æt. 6. Fall from second floor-window on to pavement. Admitted insensible. Depressed fracture of cranial vault commencing near longitudinal sinus and running down to right ear. Spasmodic contractions of left arm and leg. Fracture of shaft of femur (left). Death in a few hours. P.M.—Skull smashed into numerous fragments, many of which were depressed. Fracture of base passing through ethmoid. Brain extensively contused and lacerated.

Compound depressed fracture of vault.—Males 3. C. 3.

1. Male, æt. 42. Kicked by horse. Crescentic wound in left frontal region. Depressed fracture of left frontal bone 3½ inches in length. Patient was quite conscious. Trephined in two places. Depressed bone raised, also two loose fragments removed. Wound cleaned and closed. Patient discharged cured in 22 days.

2. Male, æt. 13. Iron pipe fell on to head. Unconscious for a few minutes. When admitted, patient was quite conscious. Scalp wound 2½ inches long, situated 3 inches above squamous suture. Two fractures of parietal bone discovered, the lower one being slightly depressed. Upper fracture was merely linear. Both fractures about 1½ inches long. Depressed fragment raised by leverage. Wound cleaned and closed. Patient discharged cured in 7 days.

3. Male, æt. 62. Picked up in the road. Scalp wound in left frontal region. Depressed fracture of left frontal bone just in front of fronto-parietal suture. Fracture of blade of left scapula and lower third of fibula. No symptoms. Patient discharged in 19 days.

Fractures of base of skull.—Males 13, female 1. C. 14. Anterior fossa 2;

middle fossa 10; posterior fossa 2. Bleeding from ear 8; serous fluid from ear 2; subconjunctival ecchymosis 1; strabismus 1; mastoid ecchymosis 2; frontal scalp wound 1; persistent vomiting 1.

Simple fractures of vertex and base.—Fatal case.—Male, æt. 17. Fall from window on to pavement. Admitted unconscious. Hæmorrhage from nose. Large swelling over greater part of vertex, which was resonant in parts. Right arm and leg paralysed. Breathing stertorous. Depressed fracture above left orbit. Operation. Extensive fracture of left frontal bone found. Bones separated to extent of ½ inch. About 3 square inches of bone removed. Dura mater incised. Much laceration of brain found. Considerable hæmorrhage from large vein. Wound irrigated and closed. Death in 11 hours. P.M.—Fracture found to extend into left orbit. Left petrous bone fractured across middle. Under surface of left frontal lobe greatly lacerated. Slight amount of hæmorrhage on to vertex of brain.

Compound fracture of base and vertex.—Males 3. D. 3.

Fatal cases.

1. Male, æt. 17. Fall of 30 feet. Patient unconscious, breathing stertorously. Profuse hæmorrhage from right ear. Compound fracture of left elbow. Temperature rose to 107·6°. Death in 12 hours. P.M.—Extensive extravasation of blood in occipital region. Lambdoid suture was "started" along most of its length. Comminution of upper part of occipital bone. Large extradural extravasation of blood corresponding to this situation. Main fracture extended into base, opening the tympanum on both sides. Laceration of brain in neighbourhood of ethmoid and orbital plates, and also near petrous bones. Compound fracture of right olecranon.

Male, æt. 43. Attempted suicide 10 days previously by firing pistol through mouth in an upward direction. On admission patient was unconscious. Lacerated circular hole in palate. On vertex of skull, slightly to the right of the bregma, is another circular wound with contused margins. Centre of wound is protuberant, and can be seen to pulsate. Movements of right arm and leg noted, while on the left there is almost complete hemiplegia. Right pupil fixed, slightly larger than left. Reaction to light, but direct and consensuous is lost. Death in 8 days. Consciousness not regained. P.M.—Aperture on vertex of skull funnel-shaped with larger end outwards. From this aperture a linear fracture ran backwards and forwards. There was also a small fissure fracture at right angles to last named on the right side. On either side were two fractures that, starting in front of circular opening, passed backwards across the parietal bones into the occipital. Effusion of blood between the bone and dura mater was noted just behind the circular aperture. Blood partly discolourised. Right olfactory lobe was found divided. Bullet had entered the brain at the anterior part of temporo-sphenoidal lobe, and had left the brain at the posterior extremity of the superior frontal convolution. Apex of right orbital roof was absent. Right optic nerve found divided. Third nerve was uninjured except for effusion of blood into sheath. Large aperture in floor of orbit led down to hole in palate. Some fragments of lead found in orbit. Localised meningitis and softening of brain substance at seat of injuries.

3. Male æt. 57. Admitted in state of semi-consciousness, which deepened into

complete unconsciousness. Respiratory failure. Death within 24 hours. P.M.—Scalp wound of left parietal region surrounded by considerable effusion of blood. Fracture of skull extended from below parietal eminence to squamous, suture when it bifurcated, one fracture running across centre of anterior fossa to the cribriform plate, the other across the tegmen tympani. Portion of squamous bone about 1 inch in diameter was separated, and below this was a clot of blood covering a hole in the dura mater. Zygoma fractured just in front of ear. Left tympanum full of blood. Whole of left cerebral hemisphere was covered by a layer of blood ¼ inch in thickness. Grey matter of left temporo-sphenoidal lobe reduced to a pulp. Pons Varolii presented a diffuse hæmorrhage in its centre and lower part. Two patches of pneumonic consolidation in left lung.

Compound depressed fracture of base and vertex.—Fatal case.—Male, æt. 35. Kicked by horse on side of head. Admitted in a state of semi-consciousness. Ragged scalp wound above left ear. Bone bare. Depressed fracture. Escape of cerebro-spinal fluid. Second scalp wound over left eye. Linear fracture. Depression raised. Wound cleaned and sutured. Drainage. 5th day; convulsive movements of right side of face and right arm. Movements continued until the 7th day, there being eleven in all. Some return of consciousness. Irritability. Fed through tube. No optic neuritis. Evacuations passed unconsciously. 11th day, patient unconscious. No corneal reflex. Right arm flaccid. Wound above ear opened. Hernia cerebri. Needle introduced. Abscess found at depth of 1½ inches in an upward direction; 1½ oz. of pus evacuated. Middle of wound left open. 12th day, left arm rigid. Unconsciousness continues. Pus from external meatus continues to be discharged. 13th day, brain again explored for pus. Result *nil*. Occasional movements of right hand. Divergent strabismus. Mucus collected in throat. Temperature, which had fluctuated all through, gradually rose to 106·2° in last 24 hours. Death on 23rd day. P.M.—Small linear healed cicatrix with its centre 2 inches above the left supra-orbital notch covering a fissured fracture of the outer table ½ inch in length. Two inches above the left external auditory meatus a gaping wound 3 inches long, and at the bottom a hernia cerebri. On removing the skull-cap, a bulging was noticeable in the left temporo-sphenoidal lobe. Cerebral ventricles distended by fluid. In substance of left temporo-sphenoidal lobe was an abscess communicating by a track with the hernia cerebri. Abscess was as large as a walnut, and extended forwards by a long prolongation. It contained some pus. Surrounding brain substance diffluent and dura thickened. A fissure fracture extended from the above-mentioned opening in skull to the roof of the tympanum and the base of the clinoid process. Facial nerve followed through the bone was found very soft. Sinuses normal. No basal meningitis. Broncho-pneumonia in both lungs. Abscess cavity in brain corresponded to the lower extremity of the left ascending frontal convolution, and extended forwards as far as the middle of the lenticular nucleus, in the external capsule.

INJURIES OF NECK, CHEST, ABDOMEN, SPINE, AND PELVIS.

Cut throat.—Males 9, females 1. C. 7, D. 3.

Incised wounds of neck.—Males 10, female 1. C. 8, D. 3. Air-passages not opened in 6; air-passages opened through thyro-hyoid space 4; vertical wound of thyroid cartilage 1; incised wound of thorax 2.

Fatal cases.

Male, æt. 65. Large wound across thyro-hyoid space, epiglottis severed. Epiglottis sutured with silk. Wound sewn up. Tube at each angle. Patient sank and died within 24 hours. P.M.—Lungs œdematous. Atheroma of aorta and aortic flaps, on two of which were minute fresh granulations. All valves competent. Kidneys slightly granular on surface.

Male, æt. 23. Unconscious. Great pallor. Large wound across thyrohyoid space. Top of thyroid cartilage cut off. Pharynx laid open. Hyoid bone fractured. Small wound in posterior wall. Cartilage sutured and wound partially closed. Infused with 3 pints of saline solution and 1 oz. brandy. Five incised wounds of left chest, one of which had opened pleura. P.M.—Wounds of chest were in 3rd, 4th, 5th spaces, close to sternum. Heart: simple hypertrophy of right ventricle. Small amount of blood in left pleura. No pneumothorax. In upper lobe of lung were three wounds. Kidneys pale and granular.

Male, æt. 63. Two wounds in front of neck, having a transverse direction and on a level with the cricoid cartilage. Upper wound only divided skin. Great shock. Died soon after admission. P.M.—Jagged cut across trachea at lower border of cricoid 2½ inches long. Trachea divided through two thirds of its circumference. Through the undivided part was a stab that passed through both walls of œsophagus and entered the body of fifth cervical vertebra. Commencing suppuration between œsophagus and vertebral column. Lungs emphysematous. Frothy bloody fluid in tubes. Aortic valves incompetent. Small encapsuled tumour in liver. Numerous congenital cysts in kidneys. Small white tumour in cortex of each kidney, probably an adenoma.

Fractured ribs.—Males 24, females 3. C. 22, D. 5.

Complications.—Hæmothorax 1; emphysema and pneumothorax 1; chronic bronchitis 1; surgical emphysema 4; dislocation of clavicle 1; wound of lung 5; fracture of clavicle 1; ruptured kidney 1; scalp wound 1; compound 1.

Fatal cases.

1. Male, æt. 47. Fall 12 feet. Fractured ribs, 5th, 6th, 7th, 8th, left. Scalp wound. Developed delirium tremens and died on 14th day. P.M.—Pleura closed by adhesions on both sides. Laceration of left lung. Obsolete tubercle in upper lobe of left lung. Increase of fluid on removing dura mater. Convolutions atrophied.

Male, æt. 54. Run over. Fractured ribs, 1st and 2nd right, 1st—7th on left. Both clavicles fractured. Died within 24 hours. P.M.—Ribs on left side

fractured near angles. Second rib on right side fractured in two places. Blood in right pleura. Lung wounded by 2nd rib. Obsolete tubercle in both lungs.

3. Male æt. 16. No history obtained. Died within 24 hours. P.M.—Universal subcutaneous emphysema. Right pleura full of air; lung collapsed. Some blood in pleura. Eighth and ninth ribs projected into pleura near transverse processes. Lung wounded. Mediastinal and retro-peritoneal tissues distended with air.

4. Male, æt. 10. P.M.—First and fifth ribs on left side fractured; the former near its cartilage, the latter near its angle. About ½ pint of blood in each pleura. Cause not apparent on right side. Left lung lacerated.

5. Male, æt. 57. Died in Casualty. Left clavicle fractured in middle third, also 6 upper ribs on same side. Upper 4 ribs fractured on right side. Inferior maxilla broken just to right of symphysis. Left pleura contained few ounces of blood-stained fluid. Lungs uninjured. Little dilatation of right ventricle. Aortic and mitral flaps thickened but competent. Kidneys granulated on surface. Small recent meningeal hæmorrhage over tip of left frontal lobe. Small wedge-shaped cyst 1 × ¾ inch, containing clear fluid, found just under surface of frontal lobe. Walls were stained reddish brown. Two similar cysts lay under lateral surface of temporo-sphenoidal lobe of right side. Little atheroma of middle cerebral arteries.

Fractured spine.—Males 5, female 1. C. 2, R. 1, U. 1, D. 2. Fracture of spinal processes 2; no symptoms in either; both discharged cured.

1. Male, æt. 22. Fall on to back of neck from horizontal bar 6 feet above the ground. Complete paralysis of both lower extremities and left upper. Some slight movement of right arm and forearm. Intercostals and abdominal muscles paralysed. Partial anæsthesia at 3rd space and complete anæsthesia at 5th space. Tactile sensation just present in hands and forearms, but in arms sensation returns gradually till normal at shoulders. No reflexes obtainable. Retention of urine. Some unevenness about 4th and 5th cervical spines. Partial priapism. Temp. 95° F. Day after admission temperature rose to 101·4° F., and from this day until discharge it fluctuated in an irregular manner. Extremes were 105° F. and 97° F. No alteration in muscular power during stay in hospital, except that there was only slight movement in deltoid and trapezius on the right side and trapezius on the left, noted on 48th day. No alteration in sensation except that patient apparently regained tactile sensation in soles of both feet, noted on 48th day, and that left hand and forearm became anæsthetic. Retention remained until the 32nd day, when this was replaced by dribbling away of urine at all times. There was never anything like a reflex evacuation of bladder. As regards rectum, an enema or purge was required to open the bowels as a rule, but patient had no control over or knowledge of the act. Reflexes: Knee-jerk never returned up to 48th day. Plantar reflex returned on 32nd day. No other reflexes obtained. Involuntary movements of legs. Wasting of leg muscles, especially the left. Bedsores on sacrum, shoulder, heels, and elbows. Discharged unrelieved on 85th day.

2. Male, æt. 32. Previous fracture 9 years ago of 11th dorsal vertebra, and at that time had almost complete loss of sensation in legs. Loss of reflexes, retention of urine and loss of control of rectum. Retention gave way to

incontinence in course of some weeks. When discharged patient had partial control over bladder and rectum, and sensation blunted over buttocks, back of thighs, and legs. In the latter the sensation was dull on back and front. Patellar reflexes present. Patient could just stand with support. Present state: Patient can walk with one crutch. Control over bladder and rectum. Trophic sores on feet and legs. Knee reflexes present. Wasting of anterior tibial muscles and peroneal muscles. Both feet blue and cold. Ankles plantar flexed, toes flexed. Some power over toes. Sensation blunted over buttocks, back of thighs, and below the knee both back and front. Discharged relieved on 18th day.

Male, æt. 43. Fall of coal in mine on back of patient 3 years previously. Paraplegia since. Retention 14 days, and after that dribbling of urine. Bowels act without patient's knowledge. Constipation frequent. Absolute anæsthesia up to knees. Sensation greatly dulled over thighs and diminished to just below umbilicus. Knee-jerks and plantar reflexes absent. Muscles wasted but not rigid. Trophic ulcers on leg. Operation not advised.

Fatal cases.

1. Male, æt. 34. Fall from table on to floor 24 hours previously. Complete paralysis of trunk and lower extremities. Arms also paralysed with exception of biceps in each arm. Anæsthesia up to 4th space. All reflexes absent. Retention of urine. Laminectomy. Removal of spines and laminæ of 4th and 5th cervical vertebræ. Death within 12 hours. P.M.—Fracture-dislocation between 4th and 5th cervical vertebræ. Cord was more or less disorganised by hæmorrhage into its substance. Lungs congested and œdematous.

2. Female, æt. 47. Fall from window. Some irregularity of 5th and 6th cervical spines. Scalp wounds. Patient conscious. Complete paralysis of lower extremities and trunk. Upper extremities partial paralysis, there being power of slight movement in hands. Anæsthesia complete at line of nipples in front and spines of scapulæ behind. Reflexes absent. Retention of urine. Plantar reflexes returned within a few hours of admission. Twelve hours after admission plantar reflexes more marked. Retention. Bowels open unconsciously. Return of power in both trapezius muscles and also deltoids. Sensation unaltered. Twenty-four hours after admission, respirations rapid, temp. 102·8° F. Distention of abdomen. Forty-eight hours after admission, tactile sense returned to umbilicus. After 72 hours slight muscular power in hands, forearms, and arms. Plantar reflexes and knee-jerks not obtained. Temp. 103·6° F. Tactile sensation in legs. Painful sensation present over abdomen. After 96 hours patient insensible, temp. 105·4° F. Death in 6 days. Respirations were diaphragmatic throughout. P.M.—Fracture-dislocation between 5th and 6th cervical vertebræ through intervertebral disc. No fracture of laminæ. Slight comminution of bone. Dura mater ruptured over area as large as a sixpence. This lesion lay to the left of the anterior median fissure. Some softened substance of the cord bulged through opening. From this area hæmorrhage extended both vertically and horizontally for space of $\frac{1}{3}$ inch, making a partial transverse lesion. Lungs intensely engorged and œdematous. Early interstitial change in kidneys. Heart normal. Early atheroma in aorta.

Injuries of abdomen.—Males 13, females 2. C. 14, D. 1.

Fatal case.—Male, æt. 26. Kick from horse. Great pain. Rigid abdomen.

Vomiting. Cœliotomy. Retro-peritoneal hæmorrhage found. Abdomen closed. Collapse. Infusion three times. Violent delirium. Death in 3 days. P.M.—Large retro-peritoneal hæmorrhage about head of pancreas. No large vessel injured. Some blood-stained serum in belly. Organs healthy.

Ruptured liver. Males 2. D. 2.

Fatal cases.

1. Male, æt. 28. Kick from horse in right hypochondrium. Great collapse. Abdomen tense and tender. Retention. Too collapsed for operation. Dulness in flanks. Pulse rapid. Death in 2 days. P.M.—Four pints of blood-stained fluid in abdomen. No peritonitis. Superior surface of right lobe of liver was adherent to wall, and on breaking this down several small hydatid cysts escaped from aperture in liver. This rent was 3 inches long and its edges mostly composed of fibrous tissue. This led to large cavity occupying greater part of right lobe of liver and filled by a large hydatid and numerous exogenous cysts. Some blood-stained fluid in left pleura. Lungs congested. Other organs healthy.

2. Male, æt. 2¼. Run over. Died in Casualty. A pint of blood in peritoneal cavity. A longitudinal rupture just to right of gall-bladder on under surface of liver in its whole extent, and involved 1 inch of anterior surface. Left pleura contained blood. 6th and 7th ribs fractured.

Rupture of spleen. Male 1. D. 1.

Male, æt. 4. Run over. Died in Casualty. Abdomen distended, chiefly due to stomach. Half a pint of blood in peritoneum. Upper extremity of left kidney completely detached. Peritoneum over this organ was torn. Head of pancreas lacerated. Portion found free in belly cavity. Mucous membrane of stomach torn in two places on anterior and posterior surfaces. Spleen ruptured longitudinally. Blood in both pleuræ. Second to sixth ribs on right fractured, and 8th to 10th on left side. Small linear fracture of external table in occipital region.

Ruptured bladder.—Fatal case.—Male, æt. 53. Patient fell on to abdomen while running a race the day previously. On admission abdomen tender, distended, and slightly rigid. Shifting dulness in flanks. Cœliotomy. Rupture of bladder 1¾ inches long on posterior surface; entirely intra-peritoneal. Sewn up by continuous catgut suture through whole wall, and Lembert's suture through the peritoneal coat. Another slight rupture of peritoneum on posterior surface sewn up. Bladder tested by injecting fluid. Peritoneal cavity sponged out. Wound closed. Catheter through penis tied in. Abdomen distended. No action of bowels. Vomiting. Abdomen reopened on 3rd day. Peritonitis found about wound of bladder and near lying bowel. Abdomen closed. Patient died shortly afterwards. P.M.—Great distention of bowels. Intestines covered by thin layer of sticky lymph. No other sign of disease.

Ruptured sigmoid flexure.—Fatal case.—Male, æt. 60. Fall from van 5 days previously. Frequent vomiting since accident. Abdomen distended and tender. Bowels constipated. Enema; good result, less distention. Abdomen again distended. Great pain in iliac fossa (right). Temp. 101·4°. Death in 4 days. P.M.—General septic peritonitis. Colon especially distended. Plastic lymph

on intestines. Purulent fluid in pelvis. Minute hole found in sigmoid flexure through which water flowed. No sign of ulceration.

Penetrating wound of small intestine.—Fatal case.—Male, æt. 14. Fell on iron spike, which entered ischio-rectal fossa, 2 days previously. Vomiting. Delirium. Bloody diarrhœa. On admission, pinched features. Abdomen rigid, tympanitic, and tender. Liver dulness absent. Abdominal section in median line. General septic peritonitis. Free gas. Irrigation, glass drainage. Death within 24 hours. P.M.—Wound track led from left ischio-rectal fossa upwards and entered pelvis 1 inch to left of top of coccyx. Rectum uninjured. Four small wounds of intestine situated respectively in the ileum at distances of 3, 5, and 18 inches from cæcum, there being 2 perforations close together at 5 inches. Wounds were all roughly transverse, and measured about ¼ inch in length.

Fractured pelvis.—Males 3. D. 3.

Fatal cases.

1. Male, æt. 6. Run over. Great shock. Death in 24 hours. P.M.—Fracture of pelvis just to the left of symphysis. No injury to peritoneum or bladder. Organs normal.

2. Male, æt. 22. Run over by railway truck. Great shock. Compound comminuted fracture of left tibia and fibula. Fractured anterior superior spine and rami of pubes. No urine in bladder. Death in an hour. P.M.—Fracture passed through exteral and pubic rami on both sides. Anterior surface of bladder rent extra-peritonaelly. Urethra intact. Left sacro-iliac joint torn open. Fourth to eleventh ribs on right fractured. Lung lacerated. Pleura contained 2 pints of fluid.

3. Male, æt. 36. Fall of 40 feet. Pressure on iliac spines caused great pain. Fluctuating swelling in perinæum. Scrotum swollen. Some swelling on lower part of abdomen. Catheter passed; no urine. Died soon after admission. P.M.—Pubic bone fractured through body and also at its junction with ischium. Bladder intact. Hæmorrhage around left kidney. Blood-stained fluid about urethra. Scrotum swollen, and infiltrated with bloody fluid.

INJURIES OF UPPER EXTREMITIES.

Injury to roots of brachial plexus.—Males 3. R. 1, U. 2.

Cause of injury.—Fall from cart 1; knocked down by wave 1; arm caught between strap and revolving wheel 1. Paralysis complete in arm and forearm in 2 cases, and partial in 1. Forearm anæsthetic with band of anæsthesia extending up antero-external aspect of arm in 2 cases. Band of anæsthesia extending from clavicle down external aspect of arm and forearm to thumb and index finger in 1 case. Brachial plexus cut down on in 2 cases, and found involved in cicatricial tissue. No further treatment. Muscles showed reactions of degeneration in 2 cases.

Wounds of forearm involving nerves.—Males 3, females 2. C. 2, R. 3.

1. Male, æt. 16. Divided median nerve at wrist in three quarters of its extent. Terminal phalanges of index and middle finger alone affected, so that sensation was partially lost. Suture. Partial return of pain sense and localisation.

2. Female, æt. 41. Median nerve and superficial tendons divided at wrist. Analgesia alone over affected area. Suture. Sensation perfect in 59 days.

3. Male, æt. 50. Median nerve, flexor long. pollicis, and index and middle tendons of sublimis digitorum divided. Suture. Slight return of sensation in index finger on terminal phalanx (dorsal aspect).

4. Male, æt. 28. Median nerve divided at wrist. Suture. Some loss of tactile sensation on dorsal aspect of index and middle finger 12 days after accident, when discharged.

5. Female, æt. 19. Divided ulnar nerve, flexor sublimis tendons, and flexor carpi ulnaris. Suture. No return in 11 days on discharge.

Wounds of forearm.—Males 3, female 1. C. 4. Flexor carpi ulnaris divided 1; deep fascia torn and external condyle muscle exposed 1; triceps and external condyle muscles exposed 1.

Wounds of hand.—Males 4, females 3. C. 7. Deep palmar arch divided 1; primi and secundi internodii divided 1; flexor tendons of 5th finger divided 1; bullet wound of thenar eminence 1; lacerated wounds of 4th and 5th fingers 1; fingers crushed between steel rollers 1.

Dislocation of humerus.—Males 5, females 3. C. 7, R. 1. Subcoracoid 6; subglenoid 1; subspinous 1.

Complications.—Fractured ribs, hæmothorax, fractured humerus.

1. Male, æt. 14. Run over. Chloroform. Dislocation proved subcoracoid. Reduction not satisfactory. Soft crepitus felt. Incision over biceps grove. Rent found in capsule at antero-internal aspect. Oblique fracture through neck and great tuberosity running down and inwards. Reduction and retention *in situ* by ivory peg. Union good. Movement fair on discharge.

2. Male, æt. 58. Subspinous dislocation. Reduction by direct traction.

3. Male, æt. 38. Unreduced subcoracoid of 5 weeks' standing. Paralysis of musculo-spiral and ulnar nerves. Reduction under anæsthetic. Some improvement in paralysis on discharge.

Fracture of humerus.—Males 5, female 1. C. 6. Surgical neck 1; upper third 2; lower third 1; T-shaped into elbow 1; transverse above condyles 1; concussion 1. Scalp wounds 3; contusion of thigh 1.

Compound fracture of humerus.—All in lower third. Internal condyle comminuted 1; joint involved 2.

Compound fracture of ulna.—Male 1, female 1. C. 2. Olecranon in both. Small separation 1. Wired 1. Direct violence in both.

Compound comminuted fracture of ulna.—Male, æt. 49. Direct violence. Dirt ground in. Humerus comminuted. Fragments of olecranon and humerus removed as well as portion of trochlear surface. Suppuration. Went out with granulating surface.

Compound fractures of hand.—Males 5, females 2. C. 7. Fracture of 3rd and 4th metacarpals 1; fracture of 2nd metacarpal 1; fracture of 5th meta-

carpal 1; saw cut of phalanges of thumb 1; fracture of phalanx of thumb 1; fractures of phalanges of 3rd and 4th fingers 1; amputation by chaff-cutter of terminal phalanges of thumb 1, index 1; stripping up of skin on dorsum 2; gangrene of skin on dorsum 1; necrosis of phalanx 1.

INJURIES OF LOWER EXTREMITIES.

Wounds of gluteal region.—Males 3. C. 2, R. 1.

Male, æt. 25. Fall. Spike of railing perforated ilium 2½ inches from mid-line on a level with the upper border of sacrum. Persistent temperature. Bare bone felt. Perirectal cellulitis. Operation. Posterior surface of sacrum found bare; scraped, and dead bone removed. Temperature remained raised. Second operation. Intra-pelvic abscess evacuated through sciatic notch. Profuse discharge. Third operation. Intra-pelvic abscess evacuated through Petit's triangle. Boracic baths. Temperature fell. Discharged with sinus to Swanley.

Wounds of thigh.—Males 5. C. 4, D. 1. Deep punctured wound 1; stripping up of skin 1. Grafted 1.

Fatal case.—Male, æt. 3. Run over by cart. Lacerated wound just above knee on inner side. Bone bare. Hæmatoma of elbow and fingers. Wound irrigated. Counter-opening. Skin sloughed; wound foul. Boracic bath. Temperature raised. Diarrhœa and wasting in spite of fall of temperature. Rhonchi in lungs. Death. P.M.—Periosteum stripped up from inner surface of femur. Commencing ossification under periosteum. Two short intussusceptions in small intestine, easily reducible. Viscera normal.

Wounds of legs.—Males 5, females 1. C. 5, R. 1. Dog-bite 2; lacerated wound with bare bone on tibia 1; thigh lacerated 1; scalp wound 1.

Traumatic synovitis.—Males 8, females 2. C. 9, R. 1. Genu valgum 1; displaced internal semilunar 1: lacerated wound of calf 1; ruptured internal lateral ligament 1.

Penetrating wounds of knee.—Males 3, females 2. C. 4, D. 1. Glass; railing spike; rusty nail; table knife; needle. Synovia escaped 3. Fatal: pyæmia.

Compound dislocation of hip.—Male, æt. 28. Fall between platform and moving train. Large lacerated wound over great trochanter. Bone exposed. Head of femur on pubes. Anterior superior spine comminuted. Wound cleaned. Reduction easy. Tensor vaginæ femoris, gluteus medius, and sartorius sutured. Drainage. Plaster-of-Paris splint. Metacarpo-phalangeal joint and interphalangeal joint of left thumb opened. Irrigated. Aseptic dressing. Some suppuration. Red sore on sacrum. Thiersch's grafts. Discharged with granulating surface.

Dislocation of foot.—Female, æt. 24. Slipped from tramcar. Foot dislocated backwards. Malleoli intact. Anæsthesia. Reduction.

Subastragaloid.—Male, æt. 33. Fall of 8 feet on to loose planks, between which foot was wrenched. Heel lengthened. Inside of foot concave. Sole looked inwards. Both malleoli well marked. Head of astragalus easily felt between malleoli. Anæsthetic and reduction. Plaster-of-Paris splint.

Fracture of shaft of femur.—Males 32, females 30. C. 56, R. 3, D. 3. Upper third 19, middle third 25, lower third 18. Direct violence 19; greenstick 2.

Complications.—Fractured clavicle 2, patella 1, inferior maxilla 1, humerus 1, hæmatoma of thigh 1; concussion 1; pneumonia 1; contusion of thigh 1; scarlet fever 1; infantile paralysis 2.

Treatment.—Plaster-of-Paris only 24; Plaster-of-Paris and long outside 24; Plaster-of-Paris, long outside, and extension 22; Macintyre splint 1; sandbags 1. Result: Union delayed 4; shortening noted in 17 cases, ½ inch 4 cases, ¾ inch 1 case, 1 inch 7 cases, 1¼ inches 3 cases, 1 inch in 2 cases of infantile paralysis.

Male, æt. 6. Impacted fracture of lower end of femur. Caught leg in wheel of carriage. Deformity appeared to be a separation of epiphysis, which had taken place with some rotation forwards of external condyle. Reduction impossible. Incision. Impacted fracture found, the lower end of upper fragment overlapping the lower to extent of about half its transverse area. Overlapping portion excised. Progress good.

Fatal cases.

1. Male, æt. 6. Leg caught in wheel of carriage and jammed. Fracture of inferior maxilla. Hæmatoma of face. Fracture of femur in middle third. Left arm rigid. Retention. Twitching of left arm. Coma. Raised temperature. Mouth drawn to right side. Twitching of both arms. Death on 6th day. P.M.—Dura and skull intact. Whole of left frontal lobe covered by blood-clot to depth of ¼ inch. Brain to depth of ½ inch studded with ecchymoses.

Male, æt. 10. Run over by van. Great shock. Fracture of femur in middle third of shaft and of pubic ramus. Blood from urethra. Catheter passed easily. Rise of temperature on 5th day. Breathing rapid. Œdema over pubes. Death on 7th day. P.M.—Horizontal ramus of pubes fractured. No injury to bladder or urethra. Retro-peritoneal hæmorrhage on posterior abdominal wall. No large vessels ruptured. Some congestion of lungs.

Female, æt. 54. Fall 30 feet. Femur fractured in upper third. Fracture of 2nd, 3rd, and 4th ribs on right side. Great shock. Temperature rose on 3rd day. Pulse weak and rapid. Death on 6th day. P.M.—Lower lobe of right lung collapsed. Broncho-pneumonia. Small fibroid cavities. Left lung emphysematous. Heart dilated.

Comminuted fracture of shaft of femur.—Male 1. C. 1. Femur fractured in middle and at lower third of shaft. Wound of leg.

Compound comminuted fracture of shaft of femur.—Female, æt. 42. Fall from window. Femur fractured at lower fourth. Muscles much lacerated. Amputation in lower third of thigh. Some suppuration in stump. Discharged cured.

Fractures of neck of femur.—Males 3, females 7. C. 5, R. 5. Impacted 5; unimpacted 5. Fractured patella 1; previous fractured patella 1. Bedsores 2. Shortening noted: ¾ inch 3 cases; 1 inch 1 case. *Treatment.*—Sandbags 6; long outside splint 1; long outside splint and plaster splint 1; long outside splint, plaster splint, and extension 1; leather splint 6.

Fractures of patella.—Males 20, females 7. C. 24, R. 2, U. 1. Right 14; left 13. Transverse 25; star-shaped 2. Previous fracture 2, 1 through fibrous union and 1 through bone below fibrous union, after interval of 4 years in both cases. Direct violence 3; indirect 18; remainder undetermined. Wired 6;

suppuration 2, ankylosis 1; remainder treated with ice-bag followed by plaster or leather splints.

Fractures of tibia and fibula.—Males 84, females 28. C. 109, D. 3. Right 57; left 50; not stated 4. Pott's fracture 22. Direct violence 18; indirect violence 89; undetermined 4. Upper third 7; middle third 4; lower third 74; remainder tibia and fibula fractured at different situations.

Complications.—Colles' fracture 1; dislocation of ankle 1; tibia of opposite side 1; ribs 2; greenstick 1; humerus 1; sternum 1; cirrhosis of liver 1.

Male, æt. 25. Patient admitted very intoxicated. Fracture of tibia and fibula at lower third. Plaster splint applied at once. Patient experienced no pain. In 38 hours toes were noticed to be rather dark in colour. Splint removed, Neville's splint substituted. Skin over ankle mottled. Toes regained fair colour. In next 24 hours gangrene became well marked. Amputation below knee. Arteries found intact but empty.

Fatal cases.

1. Male, æt. 28. Fracture of tibia and fibula in lower third. Delirium tremens. Temperature rose to 106° F. Death on 3rd day. P.M.—Lungs congested. Kidneys large as regards cortex. Early cirrhosis of liver.

2. Male, æt. 52. Died in Casualty. P.M.—Tibia and fibula fractured in lower third. Sternum also fractured in 3 places. All ribs on left side and lower eight on right. Humerus fractured at junction of upper and middle thirds. Blood in pleural cavities.

3. Male, æt. 38. Fracture of tibia and fibula (right), at junction of middle and lower thirds. Day after admission epileptiform seizure, temperature rose to 102° F., and delirium set in, which continued until death on 3rd day. P.M.—Lungs congested and œdematous. Fatal nephritis in kidneys. Brain normal.

Compound fractures of tibia and fibula.—Males 10, females 8. C. 17, D. 1. Direct violence 10; indirect violence 7. Right 11; left 9; Pott's 1. Upper third 4; middle third 2; lower third 11. Erysipelas 1; necrosis 1; delayed union 1; dislocation of ankle 1; fracture of ribs 1. *Treatment.*—Wiring of tibia 1; Neville's splint 2; boracic bath 1; primary amputation 1, secondary amputation 1, both through leg; remainder antiseptic dressing and plaster splints.

Fatal Case.—Male, æt. 49. Run over. Fracture in lower third. Impaction. Delirium tremens. Death on 10th day. P.M.—Fracture of 4th to 6th ribs on right side, and 2nd to 8th on left. Broncho-pneumonia.

Compound comminuted of tibia and fibula.—Males 1, females 3. C. 3, D. 1. Right 3; left 1. Direct violence 2. Infusion 1; primary amputation of femur in lower third 1; remainder antiseptic dressings and plaster splints.

Fatal case.—Female, æt. 7. Run over by tramcar. Great shock. Fracture in upper third of right leg. Left knee-joint opened and epiphysis of femur separated. Arteries intact. P.M.—Organs healthy.

Fracture of tibia.—Males 20, females 8. C. 27, R. 1. Direct violence 9. Lower third 17; middle third 3; upper third 8. Right 18; left 10. Macintyre's splint 1; remainder plaster splints.

Comminuted of tibia.—Males 3. C. 3. Direct violence 1. Right 2. Lower third 1; middle third 2. Plaster splints in all.

Compound of tibia.—Males 3. C. 3. Direct violence 3. Right 2. Lower third 2; middle third 1. Plaster splints in all.

Fractured fibula.—Males 22, females 15. C. 37. Direct violence 5. Right 17; undetermined 3. Pott's 17. Lower third 35; middle third 1; upper third 1. Macintyre 3; remainder plaster splints.

Compound fracture of foot.—Phalanges of 1st and 2nd toes 1; 5th metatarsal 1. Both direct violence.

Compound comminuted of foot.—Phalanges of great toe 2. Excision of astragalus 1, internal cuneiform, and base of 2 metatarsals for necrosis 1.

SPECIAL TABLE I.—

A. INGUINAL HERNIA.—

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
1	Porter	M.	20	R.	8 months	—	?
2	Dealer	M.	66	R.	1 month	—	?
3	Labourer	M.	25	L.	4 years	—	?
4	Labourer	M.	27	R.	1 year	—	?
5	Shop assistant	M.	56	R.	1 year	—	?
6	Brass trimmer	M.	16	R.	6 months	—	?
7	Clerk	M.	47	R.	30 years	—	?
8	Gardener	M.	74	R.	20 years	—	?
9	Clerk	M.	34	L.	4 months	—	?
10	Compositor	M.	27	Double	10 years	—	?
11	Sorter	M.	47	Double	35 years	—	?
12	Married	F.	55	L.	Some years	—	?
13	Porter	M.	25	R.	4 months	—	?
14	Labourer	M.	36	R.	8 years	—	?
15	School	M.	10	R.	Many years	—	?
							b. Reducible.
16	Nil	M.	16	R.	9 months	—	?
17	Tramcar man	M.	21	R.	Some years	—	?
18	Carman	M.	31	R.	4 months	—	Epiplocele
19	Porter	M.	37	R.	7 weeks	—	?
20	Cleaner	M.	22	L.	4 months	—	?
21	Porter	M.	34	R.	7 years	—	Epiplocele; infantile

HERNIA.

a. Reducible. No operation.

Treatment.	No. of days in hospital.	Result.	Remarks.
Nil	2	U.	Refused operation.
Truss	14	R.	Irreducible umbilical hernia.
Truss	3	R.	
Truss	9	R.	
Nil	8	U.	Vomiting.
Nil	8	U.	Albuminuria.
Nil	1	U.	Bronchitis.
Truss	7	R.	
Nil	7	U.	Operation not recommended.
Nil	19	U.	Varicocele. Operation.
Nil.	5	U.	Bronchitis.
Ice-bag.	1	R.	Inflamed.
Nil.	3	U.	Inflamed.
Nil.	5	U.	Vaginal hydrocele.
Nil.	42	D.	Incontinence of urine. Supra-pubic. Nothing found. P.M.—Pyelitis; ? early suppurative nephritis.

Radical Cure.

Sac empty. Ligatured with silk and ablated. Pillars sutured with silk	22	C.	
Sac empty. Ligatured with silk and ablated. Pillars and conjoint tendon sutured with three silk sutures	22	C.	
Omentum ligatured and removed. Sac ligatured and ablated	51	C.	Fistula in ano. Operation.
Sac empty. Ligatured and ablated	30	C.	
Sac empty. Ligatured and ablated			Small, oval, yellow, gelatinous body found in sac.
Omentum ligatured and removed. Sac ligatured with silk and ablated. Pillars sutured with four silk sutures	41	C.	Suppuration. Deep silk suture discharged.

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
22	Foreman	M.	24	Double	10 months	—	?
23	Clerk	M.	19	L.	1 month	—	Funicular
24	School	M.	7	R.	5 years	—	Epiplocele
25	Engineer	M.	25	R.	7 months	—	Entero-epiplocele
26	Grocer	M.	19	R.	7 months	—	Entero-epiplocele. Congenital
27	Student	M.	20	R.	12 years	—	Epiplocele
28	Jeweller's assistant	M.	21	R.	9 months	—	?
29	Cook	M.	44	R.	3 years	—	?
30	Painter	M.	41	R. L.	10 years	—	Enterocele (left); large intestine
31	Engine-driver	M.	41	L.	15 years	—	Enterocele
32	Nil	M.	13	R.	4 years	—	Congenital
33	Housemaid	F.	16	R.	1 month	—	?
34	Newsvendor	M.	23	L.	3 weeks	—	Entero-epiplocele
35	Servant	M.	21	L.	3 years	—	Enterocele
36	Gardener	M.	16	R.	3 days	—	Enterocele; funicular
37	Ostler	M.	23	R.	1 year	—	?

Treatment.	No. of days in hospital.	Result.	Remarks.
Sacs empty; both ligatured and ablated. Pillars sutured with one kangaroo tendon on either side	21	C.	
Sac empty. Partial excision after ligature with silk. Pillars stitched with four silk sutures	30	C.	Portion of sac left on cord after being stitched up.
Omentum reduced. Sac ligatured and excised. Circumcision	29	C.	Operation for strangulated hernia on same side five years previously.
Omentum ligatured and removed. Large intestine reduced. Sac ligatured with silk and ablated. Pillars sutured with silk	46	C.	
Omentum ligatured and removed. Sac ligatured. Lower part stitched to form tunica vaginalis. Pillars sutured with two kangaroo tendons	19	C.	Large external ring.
Omentum ligatured and ablated. Sac ligatured and excised. Pillars sutured with five kangaroo tendons	109	C.	Previous radical cure 3 years ago. Inflammatory thickening in abdominal wall.
Sac empty; ligatured with silk and ablated. Pillars and conjoint tendon ligatured with five silk sutures	21	C.	
Sac empty; quilted with catgut. Pillars and conjoint tendon sutured with kangaroo tendon	44	C.	
Right sac empty. Ligatured with silk and ablated. On left side no proper sac found. Large intestine discovered only partially covered by peritoneum. Gut pushed back and tissues over it stitched with silk sutures	36	C.	
Small intestine reduced. Sac ligatured and ablated. Pillars sewn with silk	27	C.	Lipoma of cord.
Sac empty; ligatured with goldbeater's skin. Lower part formed into tunica vaginalis. Pillars sutured with six goldbeater's skin sutures	13	C.	
Sac empty; ligatured with silk and ablated. Pillars stitched with four silk sutures	29	C.	
Sac empty. Sac quilted. Pillars sutured with kangaroo tendon	22	C.	
Sac empty; quilted. Pillars and conjoint tendon sutured with kangaroo tendon	28	C.	Hydrocele of tunica vaginalis on right side partially excised and drained.
Sac empty; quilted. Pillars sutured with kangaroo tendon	28	C.	
Sac empty; quilted. Pillars sutured with kangaroo tendon	17	C.	

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
38	Navy candidate	M.	15	R.	6 months	—	Epiplocele
39	Horsekeeper	M.	22	R.	2 years	—	?
40	Milkman	M.	29	R.	1 month	—	Enterocele
41	Waiter	M.	17	R.	4 months	—	Acquired
42	Tax collector	M.	23	L.	Many years	—	Funicular
43	Yard boy	M.	18	R.	4 years	—	Enterocele
44	Messenger	M.	19	R.	4 months	—	?
45	School	M.	14	R.	?	—	?
46	Nil	M.	1¼	R.	From birth	—	Funicular
47	Labourer	M.	49	Double	6 months left; ? right	—	?
48	Warehouseman	M.	17	R.	6 weeks	—	Funicular
49	Steward	M.	24	R.	Many years	—	Epiplocele
50	Stoker	M.	25	R.	14 months	—	,,
51	Stockkeeper	M.	63	L.	30 years	—	Epiplocele; funicular
52	Hawker	M.	23	L.	3 years	—	Acquired
53	School	F.	14	Double	7 years	—	?
54	Porter	M.	17	L.	?	—	Congenital
55	Hammerman	M.	18	L.	2½ years	—	Epiplocele
56	Labourer	M.	35	L.	15 years	—	?
57	,,	M.	41	L.	3 months	—	Retro-peritoneal

Treatment.	No. of days in hospital.	Result.	Remarks.
Omentum ligatured and removed. Sac ligatured and retained *in situ*. Pillars sutured with two kangaroo tendons	23	C.	Both rings very large.
Sac empty; ligatured and ablated. Pillars sutured with kangaroo tendon	30	C.	Operation also for left varicocele.
Sac empty; ligatured and ablated	39	C.	
Sac empty; ligatured and excised	19	C.	
Sac empty; ligatured and excised; neck very narrow. Pillars sutured with one suture	30	C.	Hydrocele of cord also found and excised.
Sac contained gut. Sac ligatured and ablated	27	C.	
Sac empty; ligatured and ablated	39	C.	Some suppuration.
Sac empty; ligatured and ablated. Pillars sutured with silk	22	C.	Not noticed till medically examined for army.
Sac ligatured and ablated. Pillars sutured	57	C.	Both testicles in scrotum.
Radical cure; left. Sac empty; quilted with catgut. Pillars sutured with kangaroo tendon	22	C.	Right hernia did not pass through external ring.
Sac empty; ligatured and ablated	11	C.	
Omentum in sac. Sac ligatured and ablated. Pillars sutured	21	C.	
Omentum ligatured and ablated. Sac ligatured and ablated. Pillars stitched with eight catgut sutures	28	C.	
Omentum reduced. Sac ligatured and ablated	26	C.	Truss for 30 years. Large ring.
Sac empty; ligatured and ablated. Testicle excised with three inches of cord	22	C.	Recurrent hernia. Undescended testis not noted at previous operation 1 year ago.
Right sac not found. Pillars approximated with silk sutures. Left sac empty; ligatured with silk and ablated. Pillars closed by Bank's method with silk	28	C.	
Sac empty; ligatured at neck. Lower part stitched up to form tunica vaginalis. Intermediate portion excised. Pillars sutured with kangaroo tendon	31	C.	Operation for left varicocele.
Omentum ligatured and removed. Sac ligatured with silk and ablated. Pillars sutured with silk	28	C.	
Sac empty; quilted with catgut. Pillars and conjoint tendon sutured with kangaroo tendon	34	C.	Previous right radical cure.
Four inches of sigmoid flexure found in cellular tissue without any sac at all. Gut was pushed back and tissue stitched to retain it in position. An empty hernial sac was also found. Pillars approximated	44	C.	Deep suppuration. Silk ligature discharged.

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
58	Labourer	M.	35	R.	9 years	—	Epiplocele
59	Married	F.	34	Double	R. 4 mos.; L. 2 weeks	—	Right (?); Left epiplocele
60	Police constable	M.	25	L.	1 month	—	?
61	Porter	M.	21	L.	12 days	—	?
62	Police constable	M.	31	L.	3 weeks	—	?
63	Carman	M.	30	L.	11 months	—	Epiplocele
64	Porter	M.	22	R.	1 week	—	?
65	School	M.	12	R.	Since birth	—	Funicular
66	Nil	M.	2½	R.	„	—	Funicular enterocele
67	Labourer	M.	20	R.	1 month	—	?
68	„	M.	19	R.	5 years	—	?
69	Gardener	M.	47	R.	„	—	Epiplocele
70	Coal porter	M.	37	Double	3 years	—	Right entero-epiplocele; Left epiplocele; both funicular

Treatment.	No. of days in hospital.	Result.	Remarks.
Omentum reduced. Sac quilted with catgut. Pillars sutured with kangaroo tendon	36	C.	Suppuration.
Left sac empty; ligatured and excised. Pillars sutured with four silk sutures. Two inches of round ligament also removed. Right omentum in sac; reduced. Sac ligatured and removed. Pillars sutured with three silk sutures. Portion of round ligament removed	21	C.	
Sac empty; ligatured and excised. Pillars sutured with three sutures	23	C.	
Sac empty; ligatured and excised. Pillars and conjoint tendon sutured with two ligatures	19	C.	Some straw-coloured fluid in sac.
Sac empty; ligatured and excised. Pillars and conjoint tendon sutured with two silk sutures	25	C.	Large external ring.
Omentum reduced. Loculus in lower part of sac containing serous fluid. Sac ligatured and excised. Pillars stitched together	17	C.	
Sac empty; ligatured and excised. Pillars and conjoined tendon approximated with two silk sutures	24	C.	Great pain in hernia; no cause found.
Sac empty; quilted with catgut. Pillars and conjoined tendon approximated with one kangaroo tendon	26	C.	
Gut reduced. Sac ligatured and excised. Pillars stitched with four silk sutures	38	C.	Phimosis; circumcision; suppuration.
Sac empty; ligatured and ablated. Pillars approximated with three silk sutures by Bank's method	22	C.	Varicocele, left. Operation.
Sac empty; ligatured with catgut and ablated. Pillars sutured with six catgut threads	25	C.	
Omentum reduced. Sac ligatured with silk and ablated. Pillars stitched with kangaroo tendon and silk	29	C.	
Right. Omentum ligatured and ablated. Small gut reduced. Sac quilted with catgut. Pillars sutured with kangaroo tendon Left. Omentum ligatured and removed. Upper portion of sac quilted. Lower portion formed into tunica vaginalis, the testis being stitched to it as there was no tunica vaginalis around it	54	C.	

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
71	Postman	M.	21	R.	1 month	—	Funicular epiplocele
72	Seaman	M.	18	R.	,,	—	Epiplocele
73	School	F.	11	L.	5 weeks	—	Congenital
74	Domestic servant	F.	16	R.	12 months	—	?
75	,,	F.	17	R.	6 months	—	Acquired
76	,,	F.	14	R.	12 years	—	?
77	Recruit	M.	17	R.	?	—	—
78	Police constable	M.	24	L.	14 days	—	Funicular
79	Labourer	M.	25	R.	1 week	—	?
80	Nil	F.	41	L.	18 months	—	Enterocele
81	Clerk	M.	22	R.	18 years	—	Epiplocele
82	Police sergeant	M.	49	R.	4 years	—	?
83	Potter	M.	18	R.	3 months	—	?
84	Shoemaker	M.	23	L.	3 years	—	Entero-epiplocele
85	Scholar	M.	10	R.	12 months	—	?
86	Salesman	M.	19	L.	6 weeks	—	Epiplocele
87	Hammerman	M.	33	R.	?	—	Acquired
88	Laundryman	M.	19	R.	2 months	—	Epiplocele
89	Labourer	M.	30	R.	2 years	—	,,

Treatment.	No. of days in hospital.	Result.	Remarks.
Omentum reduced. Sac ligatured with silk and ablated. Pillars approximated with seven silk sutures	25	C.	
Omentum ligatured and removed. Sac ligatured with catgut and removed. Pillars approximated with five catgut sutures	29	C.	
Sac empty; ligatured and excised. Pillars sewn with four silk sutures	22	C.	
Sac empty; ligatured with silk and ablated. Pillars stitched with four silk sutures	56	C.	Suppuration.
Sac empty; ligatured and ablated	27	C.	
Sac empty; quilted. Pillars sutured with kangaroo tendon	17	C.	
Sac empty; quilted. Pillars and conjoined tendon sutured with kangaroo tendon	28	C.	Hernia not noticed till medically examined for army.
Sac empty; ligatured and ablated. Pillars and conjoined tendon sutured with kangaroo tendon	22	C.	
Sac empty; twisted; ligatured and ablated. Pillars approximated with five silk sutures	18	C.	
Sac empty; ligatured with silk and ablated. Pillars approximated with five silk sutures	31	C.	Hernia descended in labium.
Omentum ligatured and ablated. Sac ligatured and ablated. Pillars sutured with silk and kangaroo tendon	26	C.	
Sac empty; ligatured and excised. Pillars and conjoined tendon sutured with kangaroo tendon	26	C.	
Sac empty; ligatured and ablated. Pillars approximated with four silk sutures	30	C.	Great pain at neck of sac.
Sac empty; ligatured and ablated	43	C.	
Sac empty; ligatured and ablated. Pillars sewn with two silk sutures	17	C.	
Omentum reduced. Sac ligatured and ablated. Pillars approximated with three silk sutures	34	C.	Large external ring.
Sac empty; ligatured and ablated. Pillars sutured with four silk stitches. Hydrocele of cord incised and drained	37	C.	Admitted for hydrocele; duration of hernia doubtful.
Sac empty; ligatured and ablated. Pillars approximated with four silk sutures	23	C.	
Omentum ligatured and ablated. Sac ligatured and excised. Pillars approximated with three silk sutures	18	C.	Truss for 2 years.

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
90	Butcher	M.	28	L.	4 months	—	Funicular
91	Labourer	M.	50	L.	8 months	—	Recurrent
92	,,	M.	30	L.	6 weeks	—	?
93	Park ranger	M.	42	R.	3 weeks	—	?
94	School	M.	10	R.	Since birth	—	Funicular
95	,,	M.	15	R.	Many years	—	,,
96	Labourer	M.	17	R.	Since birth	—	Congenital
97	Boot finisher	M.	27	L.	3 years	—	?
98	Compositor	M.	25	L.	?	—	Epiplocele
99	Leather dresser	M.	36	L.	5 days	—	Funicular
100	Miller	M.	30	R.	18 months	—	Recurrent
							c. Irreducible.
101	Nil	M.	2	R.	7 months	—	?
102	Nil	M.	3 months	R.	Some hours	—	?
103	Salesman	M.	25	L.	Some hours	—	?
104	Nil	M.	2	R.	24 hours	—	?
105	Nil	M.	3	R.	10 months	—	?
106	Horsekeeper	M.	46	R.	14 years	—	?
107	Joiner	M.	34	R.	9 months	—	?
108	Nil	F.	57	R.	13 years	—	?
109	Wood-carver	M.	86	L.	Many years	—	Epiplocele
110	Nil	M.	40	R.	17 years	—	?

Treatment.	No. of days in hospital.	Result.	Remarks.
Sac ligatured and ablated	25	C.	—
Omentum ligatured and ablated. All structures of cord cut away except the vas deferens. Sac quilted. Pillars sewn with kangaroo tendon	28	R.	Previous radical cure 5 months ago. Recurred again later.
Sac empty; ligatured with silk and ablated. Pillars and conjoined tendon sutured with kangaroo tendon	17	C.	—
Sac empty; ligatured with silk and ablated. Pillars approximated with one kangaroo tendon	15	C.	—
Sac empty; twisted, ligatured with silk, and drawn between abdominal muscles. Pillars sewn with one kangaroo tendon	41	C.	—
Omentum ligatured and removed. Sac stitched with silk and ablated. Pillars approximated with three silk sutures	22	C.	—
Intestine reduced. Sac divided. Upper part sewn up with silk. Lower portion sewn up to form tunica vaginalis. Testis sewn into bottom of scrotum. Pillars approximated with silk sutures	27	C.	Undescended testis.
Sac empty; ligatured with silk and ablated	25	C.	—
Omentum ligatured and removed. Sac ligatured with silk and ablated	26	C.	Large mass of omentum removed.
Sac empty; ligatured with silk and ablated. Pillars ligatured with kangaroo tendon	17	C.	—
Omentum reduced. Sac ligatured and ablated. Pillars sutured	13	C.	Radical cure 9 months previously.

No operation.

Ice-bag	4	R.	Irreducible 10 days.
Hot bath; taxis	2	R.	—
Ice-bag; spontaneous reduction	1	R.	—
Hot bath; taxis	1	R.	—
Ice-bag; spontaneous reduction	11	R.	Irreducible few hours.
Ice-bag; spontaneous reduction; truss	3	R.	Irreducible few hours.
Anæsthetic and taxis	4	R.	Irreducible 24 hours.
Ice-bag; spontaneous reduction	4	R.	Irreducible 1 week.
Ice-bag; anæsthetic; taxis; reduction	8	D.	P.M.—Omentum found in sac; slightly adherent. Some coils of small intestine in abdominal cavity found congested. Aortic disease.
Ice-bag; spontaneous reduction	5	R.	Irreducible 9 hours.

d. Irreducible.

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
111	Wood-carver	M.	65	R.	4 years	—	Epiplocele
112	Hairdresser	M.	41	L.	12 years	—	Funicular epiplocele
113	Fishdealer	M.	32	R.	9 years	—	Enterocele
114	Clerk	M.	40	R.	Since birth	—	Epiplocele (congenital)
115	Porter	M.	53	R.	18 months	—	Epiplocele
116	Secretary	M.	25	R.	2 years	—	„
117	Driver	M.	35	R.	7 years	—	„
118	Farrier	M.	44	L.	5 years	—	Enterocele, epiplocele
119	Innkeeper	M.	47	R.	11 years	—	Epiplocele

e. Inflamed Irreducible.

120	Labourer	M.	51	R.	Many years	—	Entero-epiplocele
121	Greengrocer	M.	54	R.	6 months	—	Enterocele, recurrent

Radical Cure.

Treatment.	No. of days in hospital.	Result.	Remarks.
Omentum ligatured and removed. Sac ligatured and drawn up through the external oblique tendon, kangaroo tendon being the material used. Pillars sutured with kangaroo tendon	23	C.	Irreducible 1 month.
Omentum adherent to bottom of sac; ligatured and removed. Sac ligatured at neck and excised. Pillars sutured with three silk stitches	29	C.	Partially reducible.
Small intestine in sac; reduced. Sac twisted, ligatured at neck, and drawn up between abdominal layers and through external oblique, where it was secured. Pillars sutured by goldbeater's skin	—	—	Irreducible 5 years.
Omentum ligatured and excised. Testicle excised. Sac ligatured. Pillars approximated	21	C.	Irreducible few hours. Testis just outside ring.
Omentum reduced. Sac ligatured with catgut and ablated. Pillars approximated with three kangaroo tendons	45	—	Irreducible less than a month. Sac very adherent to cord.
Omentum adherent in sac; ligatured and removed. Sac so adherent that it was left *in situ*. Pillars sutured with four silk stitches	36	—	Reducible inguinal hernia (left).
Omentum adherent to bottom of sac; ligatured and ablated. Sac sutured. Pillars sutured with kangaroo tendon	24	—	Irreducible 24 hours.
Omentum in sac; ligatured and removed. Large intestine found behind sac, being partially covered on anterior surface by peritoneum of sac. Sac freed on anterior surface, when the large intestine and peritoneum were pushed back and retained *in situ* by stitches. Pillars approximated with five silk sutures	27	—	Irreducible 4 days.
Omentum ligatured and removed. Sac ligatured and excised. Pillars approximated with three sutures	77	—	Irreducible many years. Sac very adherent. Stricture. Internal urethrotomy.

No operation.

Ice-bag. Partial reduction	8	R.	Operation refused.
Incision. Pus evacuated	25	R.	Previous radical cure 6 months ago.

f. Inflamed Irreducible.

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
122	Greengrocer	M.	54	R.	3 years	—	Recurrent enterocele

g. Strangulated Irreducible.

123	Barman	M.	36	R.	Since a boy	5 hours	Epiplocele
124	Nil	M.	83	L.	20 years	Few hours	?
125	Sailor	M.	65	R.	1 year	18 hours	?
126	Sadler	M.	52	R.	7 years	24 hours	Epiplocele
127	Compositor	M.	23	R.	18 months	12 hours	?

h. Strangulated Irreducible,

128	Stableman	M.	21	R.	3 years	Some hours	Recurrent

i. Strangulated Irreducible.

129	Railway porter	M.	61	R.	25 years	9 hours	Entero-epiplocele
130	Gardener	M.	66	L.	34 years	2 days	„
131	Printer	M.	55	?	30 years	12 hours	Enterocele
132	Carman	M.	24	R.	2 years	11 hours	Entero-epiplocele

Radical Cure.

Treatment.	No. of days in hospital.	Result.	Remarks.
Large intestine in sac; reduced. Sac ligatured at neck and ablated	80	C.	Herniotomy for strangulated 3 years previously.

No operation.

Ice-bag, taxis	10	C.	No vomiting. Reducible hernia on left side also.
Taxis, anæsthetic	5	C.	Taxis without anæsthetic failed at first, but succeeded later under anæsthetic. Strangulation 2 years previously also reduced by taxis.
Taxis	1[illegible]	C.	Hernia descended while patient was in bed, truss not being worn at the time.
Taxis under anæsthetic	7	C.	—
Hot bath, ice-bag. Spontaneous reduction	2	C.	Truss.

followed by Radical Cure.

Taxis. Radical cure 5 days later. Sac empty, ligatured and excised	37	C.	Radical cure 3 years previously.

Herniotomy and Radical Cure.

Sac contained large intestine, intensely congested in two places, but with the peritoneum still shining. Gut and omentum reduced. Sac ligatured and ablated. Pillars were not sutured as a drainage-tube was placed in canal	25	C.	Large scrotal hernia.
Sac contained 12 inches of small intestine with furrows at points of constriction. Omentum ligatured and removed. Sac ligatured and excised. Pillars approximated with five Lembert's silk sutures	44	C.	Suppuration.
Sac contained small intestine; returned. Sac ligatured at neck and ablated. Pillars and conjoined tendon sutured	13	C.	Large hernia.
Small knuckle of small intestine, grooved at point of constriction, but of good colour. Strangulation appeared to be produced by omentum, which was adherent to bottom of sac, being twisted round intestine. Omentum ligatured and removed. Gut reduced. Sac ligatured and ablated. Pillars sutured with kangaroo tendon	12	C.	Large scrotal hernia. Great pain. Hernia came down as truss was broken.

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
133	Nil	M.	7 months	R.	24 hours	24 hours	Enterocele
134	Carman	M.	42	R.	30 years	24 hours	Entero-epiplocele
135	Labourer	M.	26	R.	7 years	24 hours	Enterocele
136	Engine-driver	M.	57	L.	10 years	4 hours	„
137	Nil	F.	70	R.	7 years	4 days	Entero-epiplocele
138	Nil	M.	10 months	R.	9 months	24 hours	Enterocele
139	Nil	M.	9 months	R.	Since birth	20 hours	„
140	Barman	M.	36	R.	Since a boy	6 hours	Enterocele, funicular
141	Carman	M.	29	R.	14 years	12 hours	Enterocele
142	Nil	M.	27	L.	21 years	24 hours	Entero-epiplocele
143	Cook	M.	47	L.	8 months	30 hours	Enterocele

Treatment.	No. of days in hospital.	Result.	Remarks.
Knuckle of small intestine in good condition; reduced. Sac quilted. Pillars sutured	9	C.	—
Small intestine congested; reduced. Omentum œdematous; ligatured and removed. Pillars and conjoined tendon sutured	23	C.	Hernia became irreducible 5 years ago, and was reduced by taxis, since when a truss has been worn.
Small intestine slightly congested. Stricture relieved. Gut reduced. Sac ligatured and excised. Pillars and conjoined tendon stitched together with three silk sutures	18	C.	Slight suppuration.
Stricture divided before sac was opened. Intestine intensely congested. Large quantity of fluid escaped from abdomen. Sac ligatured with silk and ablated. Pillars approximated with nine silk sutures	41	C.	Very large ring. Deep suppuration.
Gut congested; returned with the omentum into abdomen. Sac ligatured and pulled up under and through external oblique, and secured in that situation. Pillars sutured with kangaroo tendon	16	C.	Wound healed well. Cystitis.
Bowel in good condition, and reduced after division of stricture. Sac ligatured and excised. Pillars sutured with two silk sutures	34	C.	Sac of hernia did not communicate with tunica vaginalis.
Bowel returned. Sac ligatured and excised. Pillars sutured with catgut	14	C.	Sac of hernia did not communicate with tunica vaginalis.
Bowel tightly nipped. Constriction relieved. Bowel reduced after adhesions to sac had been separated. 2½ feet of bowel were in sac. Sac ligatured and ablated. Pillars sutured. Non-strangulated omental hernia on left side also operated on. Omentum ligatured and reduced. Sac ligatured and ablated. Pillars sutured	50	C.	Patient was in hospital 3 weeks previously for strangulated right inguinal hernia, which was reduced by taxis.
Reduction *en masse*. Hernia found just inside internal ring. Stricture at neck of sac relieved, and gut reduced, consisting of 2 inches of small gut. Sac stitched with three sutures. Pillars sutured with three kangaroo tendons	23	C.	Patient seen in Casualty complaining of vomiting and pain in hernia. Reduction. Persistence of symptoms. Admission. Hernia felt in iliac fossa.
Strangulation due to band in sac. Stricture divided. Gut reduced. Omentum ligatured and removed. Sac ligatured and ablated. Pillars sutured with kangaroo tendon	16	C.	Fibroid phthisis. Transferred to Medical side.
Gut congested and covered with lymph; reduced. Sac ligatured and excised. Pillars sutured with two silk sutures	23	C.	Direct hernia. See 'Lancet,' Oct., 1894.

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
144	Nil	M.	80	R.	2 years	2 days	Enterocele
145	Greengrocer	M.	17	R.	6 months	8 hours	Enterocele (congenital)
146	Dealer	M.	28	R.	12 hours	12 hours	„
147	Fitter	M.	38	R.	5 years	16 hours	„
148	Clerk	M.	31	R.	15 years	8 hours	Entero-epiplocele
149	Builder	M.	23	R.	Many years	36 hours	Enterocele (congenital)
150	Labourer	M.	58	L.	6 years	60 hours	Enterocele
151	„	M.	19	R.	2 years	26 hours	„
152	Porter	M.	55	R.	10 years	24 hours	Entero-epiplocele
153	Hawker	M.	29	L.	8 years	31 hours	Enterocele (congenital)

Treatment.	No. of days in hospital.	Result.	Remarks.
Gut reduced. Sac ligatured with catgut and ablated	30	C.	Gut congested and almost black in places.
Intestine reduced. Upper portion of sac ligatured and excised. Lower portion stitched up to form tunica vaginalis. Six catgut sutures placed in anterior wall of canal and pillars of external ring	19	C.	Anterior wall of canal was incised in order to relieve stricture.
Three loops of small intestine congested and tightly nipped. Stricture divided; gut reduced. Sac ligatured at neck. Lower part stitched to form tunica vaginalis. Pillars sutured with kangaroo tendon	24	C.	
Gut returned. Sac ligatured at neck and ablated. Lower part of sac stitched to form tunica vaginalis. Pillars sutured with kangaroo tendon. Lembert's stitches used	18	C.	
Omentum returned along with gut, which was only slightly congested. Sac ligatured, twisted, drawn through external oblique, and secured *in situ*. Pillars sutured with kangaroo tendons, three in number	21	C.	
Gut deeply congested, and had lost its polish at one place. Replaced. Sac with undescended testis ligatured and excised. Pillars sutured with a continuous catgut ligature	11	C.	
Large intestine in fair condition; reduced. Sac ligatured, twisted, and drawn through external oblique and secured. Pillars sutured with kangaroo tendon	21	C.	
Small intestine reduced. Sac ligatured and ablated. Pillars sutured with one silk suture and canal closed with two silk sutures	32	C.	Hernia very tense. Patient much collapsed. Dark fluid in bottom of sac. Intestine black from blood extravasated into coats.
Small intestine reduced. Omentum adherent in sac; ligatured and removed. Sac ligatured and excised. Pillars approximated with two silk sutures	21	C.	3 feet of small intestine in sac with blood-stained fluid. Sac ruptured on posterior surface. Small rupture of mesentery. Purgatives and taxis before admission. 'Lancet,' Oct., 1894.
Small intestine in sac, which was found between the abdominal layers. Sac ligatured and ablated. Pillars approximated with six silk sutures. Undescended testis excised; atrophied. Cord ligatured separately	20	C.	'Lancet,' Oct., 1894. Hernia did not pass through the external ring.

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
154	Fishmonger	M.	50	R.	23 years	4 days	Entero-epiplocele
155	Nil	M.	18 months	R.	17 months	18 hours	Enterocele
156	Gardener	M.	49	R.	18 years	„	Entero-epiplocele
157	Hairdresser	M.	65	R.	3 years	2 days	„
158	Nil	M.	12 months	L.	From birth	3 days	Enterocele
					j. Strangulated Irreducible		
159	Moulder	M.	84	L.	40 years	24 hours	Entero-epiplocele
					k. Strangulated Irreducible		
160	Engineer	M.	69	R.	Years	Few hours	Enterocele

Treatment.	No. of days in hospital.	Result.	Remarks.
Sac contained 6 inches of small intestine, cæcum, and portion of ascending colon; also omentum, which was adherent. Intestine reduced. Omentum ligatured and removed. Sac ligatured and ablated. Pillars and conjoined tendon approximated with two silk ligatures	16	C.	Drainage to external wound.
Small intestine congested; reduced. Sac ligatured at neck and ablated. Pillars sutured	16	C.	Constriction tight at neck of sac, which contained blood-stained fluid.
Intestine congested; reduced. Omentum ligatured and removed. Sac ligatured and ablated. Pillars approximated with three silk sutures	12	C.	Large mass of omentum in sac.
Omentum adherent in sac and around neck. Adhesions freed; ligatured and removed. Loop of small intestine very œdematous and thickened. Sac ligatured at neck and ablated. Pillars sutured with four silk ligatures	19	C.	White band on intestine at point of constriction. Patient became delirious, and died of asthenia. Bowels were well open.
Straw-coloured fluid in sac; bowel but little congested. Sac ligatured and ablated. Pillars sutured with silk	1 day	D.	Temperature rose rapidly after operation to 103° F. Series of epileptiform fits. Death. No P.M.
Herniotomy only.			
Considerable amount of fluid in sac. Portion of small gut returned to abdominal cavity; remaining portion and omentum left *in situ* as adhesions were so firm	24	C.	Skin wound alone sutured. Progress good.
Herniotomy. Artificial Anus.			
Tissues over sac œdematous. Sac contained small intestine only. Constriction tight, and occluded the bowel in two positions so that lumen was just obliterated. Walls grey at seats of constriction, and very thin; congested elsewhere. Stricture relieved; gut drawn down and excised so as to include both rings of constriction. Paul's tubes inserted	4	D.	Free discharge from gut. Patient sank and died. P.M.—Artificial anus 4 feet from cæcum. Gut above opening for 2 inches greatly congested and dilated for considerable extent. Gut collapsed below opening. No peritonitis. Emphysema of upper part of lungs, while the lower were greatly œdematous. Atheroma of valves of heart.

B. Femoral Hernia.—

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
1	Washerwoman	F.	28	L.	3 months	—	?
							b. Reducible.
2	Married	F.	32	R.	5 months	—	?
3	Labourer	M.	35	L.	6 months	—	Epiplocele
4	Oilman	M.	24	Double	2 years	—	Epiplocele, L. ? R.
5	Recruit	M.	19	R.	3 years	—	Epiplocele
6	Barman	M.	19	R.	4 months	—	?
7	Nil	F.	30	R.	4 months	—	Epiplocele
							c. Irreducible.
8	Married	F.	58	L.	7 years	—	?
9	Plasterer	M.	28	R.	3 weeks	—	Epiplocele ?
							d. Irreducible.
10	Baker	M.	40	R.	21 years	—	Entero-epiplocele
11	Married	F.	47	L.	4 years	—	Recurrent
12	Shopwoman	F.	35	R.	4 years	—	Epiplocele
13	Married	F.	41	R.	2 years	—	„

a. Reducible. No Operation.

Treatment.	No. of days in hospital.	Result.	Remarks.
Truss	2	R.	Slight hernia.
Radical Cure.			
Sac empty; ligatured and excised. Fascia stitched over canal	16	C.	—
Omentum ligatured and removed. Sac ligatured and ablated. Fascia stitched over ring	23	C.	—
Omentum ligatured and removed. Sac ligatured and excised. On the right side sac was empty; ligatured and excised	42	C.	Suppurated
Omentum ligatured and ablated. Sac ligatured at neck and excised. Fascia stitched over canal	15	C.	—
Sac empty; quilted. Fascia stitched over ring	27	C.	Suppuration
Omentum ligatured and ablated. Sac thin and tore away. Neck closed by stitching fascia over pectineus to superficial fascia	25	C.	—
No Operation.			
Taxis. Reduction	9	R.	Vomiting and pain for 4 days before admission. Good impulse in hernia.
Nil	3	U.	Refused operation.
Radical Cure.			
Ice-bag. Radical cure. Gut returned. Sac ligatured and ablated	43	C.	Irreducible 10 days. No impulse. No vomiting. Bowels open.
Gut adherent in sac; separated, reduced. Omentum ligatured and ablated. Sac ligatured and excised. Fascia stitched over canal	18	C.	Operation for left femoral hernia 3 years previously.
Omentum ligatured and removed. Sac ligatured and ablated	18	C.	Serous cyst found on surface of mesentery Tonsillitis.
Omentum found rolled into a ball with narrow pedicle; ligatured and ablated. Sac ligatured and ablated	17	C.	—

e. Strangulated Irreducible.

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
14	Married	F.	73	L.	5 years	3 days	Enterocele
15	Nil	F.	67	R.	25 years	6 days	Epiplocele
16	Married	F.	35	R.	9 months	3 days	Enterocele
17	„	F.	39	R.	9 years	24 hours	Entero-epiplocele
18	Widow	F.	52	L.	1 year	48 hours	Enterocele
19	Married	F.	34	R.	6 years	15 hours	„
20	„	F.	40	L.	5 months	4½ hours	„
21	Greengrocer	M.	54	L.	4 years	12 hours	„
22	Married	F.	46	L.	6 years	24 hours	„

f. Strangulated Irreducible,

23	Single	F.	41	R.	14 days	13 hours	Epiplocele

g. Strangulated Irreducible.

24	Nil	F.	73	R.	18 months	24 hours	Enterocele
25	Married	F.	64	L.	Many years	10 hours	„

Herniotomy. Radical Cure.

Treatment.	No. of days in hospital.	Result.	Remarks.
Gut congested; reduced. Sac ligatured and ablated	1	D.	Suppression of urine. Death. P.M.—Situation of stricture was 4 feet from cæcum. 4 inches of gut was very dark, and tore on being handled. Around this portion of gut was peritonitis with flakes of lymph on intestines. Cortex of kidneys almost entirely atrophied. Some small cysts on surface.
Omentum ligatured and ablated. Sac ligatured and ablated. Fascia stitched over canal	16	C.	No vomiting.
Gut reduced. 1½ pints of serous fluid pressed out of abdomen. Sac ligatured and ablated	26	C.	—
Omentum ligatured and excised. 3 inches of small gut congested; reduced. Sac ligatured and ablated	20	C.	—
Small knuckle of intestine; reduced. Sac quilted. Fascia stitched over canal	18	C.	Deep red band on gut at seat of constriction.
Intestine intensely congested; reduced. Sac ligatured and ablated	21	C.	—
Intestine returned spontaneously after excision of sac. Sac ligatured and ablated	15	C.	Gut in good condition. 'Lancet,' Oct., 1894.
Intestine congested; reduced. Sac ligatured and ablated	9	C.	—
Sac chocolate-coloured, polish entire; reduced. Sac quilted. Fascia stitched over canal	13	C.	Progress good.

followed by Radical Cure.

Ice-bag. Spontaneous reduction. Radical cure. Sac empty; quilted with catgut. Fascia sewn over canal	32	C.	Suppuration.

Herniotomy only.

Gut congested, but not in bad condition; reduced	2	D.	Suppression of urine. P.M.—Stricture found unrelieved. Small knuckle of intestine found strangulated in sac, which was situated just inside internal ring. Gut was in a recoverable condition. Seat of stricture found 28 inches from cæcum. Contracting granular kidneys.
Gut congested. Gimbernat's ligament notched. Reduction	17	C.	Progress good. Went out with truss.

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
26	Nil	F.	37	R.	—	—	Enterocele
					h. Strangulated Irreducible.		
27	Nil	F.	54	R.	5 days	5 days	Enterocele
					i. Strangulated Irreducible.		
28	Widow	F.	41	L.	12 years	3 days	Entero-epiplocele
					j. Strangulated Irreducible.		
29	Nil	F.	70	L.	2 years	48 hours	Entero-epiplocele

Treatment.	No. of days in hospital.	Result.	Remarks.
Gut congested. Stricture relieved. Gut returned	2	D.	General septic peritonitis. Perforation of ileum 40 inches from cæcum; at which point gut had been nipped in hernial sac.
Herniotomy. Fæcal Fistula.			
Small knuckle of gut, gangrenous; left *in situ*. Gut gave way within 36 hours; free discharge of fæcal matter	7	D.	Patient very feeble. Temperature dropped to 95·6° F. Difficulty of swallowing. Death. No P.M.
Herniotomy. Artificial Anus.			
Fæcal swelling; fluid in sac. Stricture divided. Gangrenous portion excised. Paul's tube tied in. Omentum ligatured and removed	2	D.	Patient very feeble. P.M.—Loop of intestine involved, situated 3 feet from duodenum. Gut not divided. Near opening in intestine the mucous membrane had sloughed, and the rest of the wall necrotic. On the other side again the gut was entirely congested. Flakes of lymph on peritoneal coat. No general peritonitis. Stump of omentum gangrenous.
Herniotomy. Resection of Gut.			
Omentum ligatured and removed. Gut tightly adherent to neck of sac. At situation of constriction the gut was marked by two thin gangrenous portions, situated 1½ inches apart. Peritoneum was stripped from gut above constriction when adhesions were separated. 6 inches excised through median opening in abdomen. End-to-end anastomosis. Rectal feeding	4	D.	Vomiting after 24 hours. Collapse. Nutrient enemata were retained. Rectal feeding discontinued. Flatus passed with simple enema on third day. Suppression of urine. Death. P.M.—Plastic peritonitis beneath abdominal wound. Excised portion of intestine situated 3 feet from cæcum. Purulent lymph about seat of anastomosis. Small collection of pus in immediate vicinity of suture. Water test demonstrated presence of small leak on the unattached aspect of bowel. The mucous membrane formed a valve at seat of junction that prevented the onward passage of intestinal contents.

C. Umbilical Hernia.—

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
1	Scholar	M.	11	—	Since birth	—	?
							b. Irreducible.
2	Widow	F.	46	—	8 years	—	Entero-epiplocele
3	Married	F.	51	—	4 years	—	„
							c. Irreducible.
4	Nil	F.	43	—	12 years	—	Entero-epiplocele
5	Married	F.	43	—	22 months	—	„
							d. Strangulated Irreducible.
6	Nil	F.	53	—	Many years	9 days	Enterocele

a. Reducible. No Operation.

Treatment.	No. of days in hospital.	Result.	Remarks.
Nil	2	U.	Hernia was due to yielding of umbilical cicatrix. Refused treatment.

No Operation.

Belt	9	R.	Large hernia with small opening into the abdomen. Came in with dyspeptic symptoms. Irreducible 4 years.
Belt	12	R.	Large hernia; tender. Abdominal pain and diarrhœa.

Radical Cure.

Omentum ligatured and removed. Gut reduced. Sac ligatured and ablated. Recti and fascia stitched together with Lembert's sutures	36	C.	Irreducible 5 years. Anæsthetic taken badly. Artificial respiration. Severe vomiting day after operation; subsided. Progress good.
Ice-bag. Partial reduction. Operation. Adherent omentum ligatured and removed. Sac ablated. Peritoneum and abdominal wall. Intermediate superficial stitches	42	C.	Large lobulated tumour; painful. Some vomiting after operation. Cellulitis of abdominal wall, which subsided without incision.

Herniotomy. Fæcal Fistula.

Several coils of small intestine and transverse colon, which was collapsed. Abdomen explored by hand, and a band found in pelvis which constricted small gut. Peritonitis in coils of intestine near hernia. Large gut replaced. Paul's tube placed laterally in the wall of small gut, which was attached by sutures to skin. The adherent small gut in sac was left untouched	1	D.	Patient sank and died soon after operation. P.M.—Stomach and small intestine greatly distended. Signs of peritonitis on intestines with lymph. The adherent portion of intestine was a foot long, and situated about 2 feet from cæcum. All the intestinal track below this was collapsed. Intestine had been opened 9 inches above obstruction. Mitral incompetence. Atheroma of aorta. Subperitoneal and submucous fibroids

e. Strangulated Irreducible.

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
7	Married	F.	47	—	All her life	2 days	Enterocele
8	Nil	F.	56	—	?	4 days	„
							Ventral
9	Coachman	M.	39	—	2 years	—	Epiplocele

Herniotomy. Resection of Gut.

Treatment.	No. of days in hospital.	Result.	Remarks.
Sac incised; dark, fæcal-smelling fluid escaped. 3 to 4 feet of gangrenous intestine found. Constriction divided. Gut drawn out and found gangrenous in patches until 7 feet had been found gangrenous, when a diverticulum was found, beyond which gut was sound. Resection of 7 feet. Paul's tubes in both ends. Wound closed. Counter-opening for drain into pelvis	5	D.	Shock. Free discharge. Nutrient enemata in lower part of bowel. Vomiting. Intra-venous injection of 3 pints of saline fluid. Some improvement; enemata returned; no fever. Saline injection repeated with 3 oz. of brandy to 3 pints of fluid. Death. P.M.—Tube inserted into intestine 2 feet from cæcum. Some 6 inches of upper portion of gut gangrenous. Local matting of intestines. No escape of fæces. Lower part of small intestine collapsed.
Sac incised. Knuckle of small intestine found gangrenous, while on either side the wall was in a doubtful condition. Resection of 16 inches of gut. Lateral anastomosis by Halstead's method. Large solid tumour found in abdomen; left intact. Rectus divided to give more room. Wound sutured. Drainage. On third day abdomen reopened because of obstruction. Paul's tube inserted laterally into intestine	4	D.	After second operation patient sank and died. P.M.—Plastic peritonitis around wound. Large tumour of right ovary weighing 9 lbs., proved to be a fibroma. Union of intestine good; no leakage. Water passed through easily. Intestine collapsed below point of union, and was also pressed on by the tumour of ovary at a point 4 inches from cæcum. Cystic degeneration in tumour. Lungs œdematous; caseous nodules in both apices.
Hernia.			
Abdomen opened; omentum ligatured and removed. Wound closed	40	C.	Hernia small and hard. Situated midway between umbilicus and ensiform cartilage. Patient complained of pain and dyspeptic symptoms. Omentum was in small peritoneal sac, and was adherent to its walls.

SPECIAL TABLE II.—*Erysipelas*

No.	Sex.	Age.	Disease for which admitted.	Ward in which it arose.	Duration in hospital before attack.	Probable cause of attack.	Month.
1	F.	53	Cellulitis of leg	Anne	2 days	Ulcer of leg	August
2	M.	53	Carbuncle of back	William	14 days	Incision	May
3	F.	10	Sinus of knee	Alexandra	5 days	Scraping of sinus	August
4	M.	2½	Scalp wound	„	15 days	Scalp wound	July
5	F.	10	Compound fracture of tibia and fibula	„	20 days	Wound on leg	September
6	F.	57	Recurrent scirrhus of breast	Elizabeth	37 days	Operation for removal	February
7	M.	50	Epithelioma of face	Clayton	38 days	Removal of growth, excision of eye	April
8	M.	52	Epithelioma of tongue, recurrent	„	10 days	Excision of growth	January
9	M.	45	Carcinoma of neck (secondary)	„	91 days	Removal of growth	March
10	F.	27	Varicose veins of leg	Alexandra	22 days	Excision of veins	October
11	M.	10 mos.	Suppurative arthritis of knee	Victoria	16 days	Incisions about knee	December
12	M.	6	Genu valgum	Edward	50 days	Osteotomy of tibia	June
13	M.	33	Burn of forearm and neck	Clayton	9 days	Burn of forearm	April
14	F.	35	Ischio-rectal abscess, stricture of rectum	Anne	8 days	Incision of abscess	January
15	F.	79	Melanotic sarcoma of clitoris	Alexandra	9 days	Removal of growth	May
16	F.	24	Tuberculous glands of neck	Elizabeth	8 days	Removal of glands	December
17	M.	38	Compound fracture of frontal bone, crushed foot	„	41 days	Sinus in leg	„

(*arising in hospital*).

Part where eruption appeared.	Interval between action of probable cause and appearance of eruption.	Duration of attack.	Result.	Remarks.
Knee	—	4 days	D.	Numerous incisions into leg, which did well. Patient became delirious and sank and died. P.M.—Fatty liver; kidneys congested; spleen friable; recent fibrinous vegetations on aortic valves.
Back	13 days	6 days	C.	Temperature reached 105° F.
Knee	2 days	17 days	C.	—
Head	15 days	36 days	C.	Suppuration free. High temperatures. Erysipelas spread to face.
Leg	20 days	6 days	C.	Suppuration before erysipelas, necessitating continuous irrigation.
Arm and forearm	35 days	9 days	C.	Wound suppurated. Erysipelas attacked wound later and spread to back.
Face	31 days	7 days	C.	Granulating surface when attacked.
Chin	5 days	11 days	C.	Jaw divided; growth freely removed.
Neck, from wound	86 days	5 days	C.	Growth could not be completely removed; large raw surface left.
Leg	15 days	8 days	C.	Wounds suppurated.
Knee	15 days	8 days	D.	Child very feeble. Rash spread to both legs, back, abdomen. No P.M.
Leg, from osteotomy wound	2 days	5 days	C.	Wound suppurated after attack of erysipelas, and incisions made into calf and tube placed in original wound. Ultimate result good.
Arm	—	23 days	C.	Rash spread to shoulder and back.
Buttock	8 days	11 days	C.	Rash spread up the back.
Hip and abdomen	2 days	10 days	D.	Hypostatic pneumonia.
Neck	3 days	14 days	C.	—
Leg	—	17 days	D.	Temperature rose to 106·2° F. before death.

SPECIAL TABLE III.—PYÆMIA.

CLASS I.—*Admitted with the disease.*

1. *Cellulitis of arm.*—Male, æt. 54. Arising from wound of thumb received 4 days previously. Cellulitis extended up arm to axilla and over angle of scapula. Temp. 101°. Incision into hand, arm, and trunk. No pus, but large quantity of serous fluid exuded. Albumen in urine. Vomiting. On 6th day temperature reached 103° and patient became very feeble. Wounds all looked sloughy. Radio-ulnar articulation at wrist involved. Death on 8th day. P.M.—Several small collections of pus under pectoral muscles. Lungs congested and œdematous. No joints found involved.

2. *Puerperal pyæmia.*—Female, æt. 19. Patient confined 6 weeks previously. Three days before admission swelling of left buttock. On admission cellulitic condition of left buttock and thigh. Incisions. Temp. 102°. Thrombosis of internal saphenous vein dating from confinement. Right knee-joint distended with fluid, turbid serum by exploring needle. Moist sounds at bases of both lungs. Albumen in urine. Knee-joint opened. Swelling behind angle of jaw. Diarrhœa. Abscess over left elbow incised. Temperature remained high until 30 days before death, when it dropped to normal. Death on 64th day from asthenia. No P.M.

3. *Diffuse suppuration of leg and thigh.*—Female, æt. 42. Miscarriage 8 weeks previously. Leg became swollen and painful 1 week after confinement. Subsided. Swelling appeared on right knee 1 month ago, and gradually extended up the thigh to its present level. Temp. 102·6°. Albumen in urine. Antero-internal aspect of thigh red, swollen, œdematous. Incisions. Escape of blood-stained turbid fluid to amount of 1½ pints. Boracic dressings. Temperature fell. Discharge continued. Counter-incisions. Left ischio-rectal abscess incised. Temperature rose. Right knee involved; pus evacuated. Great wasting. Death on 62nd day. P.M.—Articular cartilage of knee was yellow and swollen but not eroded. Liver large, pale, and fatty. Kidneys small, cortex thin and irregular. Capsule adherent.

4. *Stricture of urethra.*—Male, æt. 37. Swelling over right deltoid and posterior border of left axilla. Gleet (7 months). Stricture in bulbous urethra,

No. 8 catheter tightly grasped. Temp. 98·6°. 17th day, swelling over deltoid and in axilla incised; pus evacuated. Temp. 103° F. 34th day, abscess of right thigh incised, also abscess over left trochanter major. Wounds healed well. Temperature subsided. Steel sounds passed before discharge on 76th day.

Class II.—*Acute bone cases.*

1. *Acute periostitis of tibia.*—Male, æt. 9. Blow on leg 5 days previously. Swelling over tibia (right) from knee to ankle. Incision; no pus, but periosteum easily raised from bone. Temp. 105° F. Incisions over upper part of tibia; pus evacuated. 5th day, tenderness over left tibia. Incision; pus evacuated. Metacarpal bone of left index finger involved. Temp. 104° F. 6th day, systolic murmur over cardiac area, and tubular breathing at base of left lung. 7th day, subcutaneous abscess over spine of scapula. Pericarditis. 9th day, incisions over left tibia again. Sank and died on 14th day. P.M.—Pericardium contained 24 oz. of grumous fluid. Abscesses in heart muscle. Broncho-pneumonia in left lung. Kidneys swollen and injected. Pus in left knee, ankle, and shoulder. Abscess beneath pectoral muscle and between liver and diaphragm.

Acute periostitis of femur.—Female, æt. 14. Blow on thigh on morning before admission. Whole leg was swollen, especially above the knee. Incisions into thigh and leg; femur, tibia, and fibula being involved. 8th day, swelling over left wrist. Incised, pus evacuated. 15th day, pus in knee (left). Incised. Temp. 104° F. 21st day, ankle swollen. 26th day, crepitations at both bases. 34th day, shoulder-joint (right) involved. Incised. 36th day, epiphysitis of upper end of left humerus. Pus evacuated. Abscess on left chest also incised. 47th day, abscess over left hip incised. 61st day, abscess around small trochanter (right) opened. Bedsore over sacrum and both posterior superior spines. Death on 84th day. P.M.—Body wasted. Small localised empyema under 6th rib, which had been resected. No visceral abscesses. Lungs œdematous. Heart healthy. Kidneys pale, fatty. No lardaceous disease.

Class—III. *Arising in hospital.*

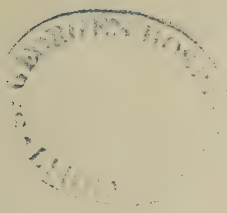
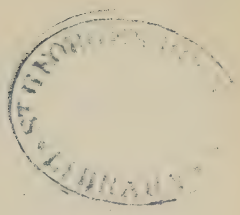
1. *Varicose veins of legs.*—Male, æt. 23. Excision of veins on both legs on 7th day. 8th day, temperature rose. Wounds suppurating. 29th day, abscess over sacrum. Wounds of leg granulating well. Temp. 102° F. 36th day, abscess of thigh. 57th day, three abscesses on left leg and four on right opened. General condition bad. 64th day, some improvement. Sweating not so profuse. After this time improvement continued and patient left for convalescent home with wounds almost healed, but with joints of both legs stiff. Discharged on 126th day.

2. *Punctured wound of leg involving knee (left).*—Female, æt. 45. Fall from window. Spike entered 3 inches below knee. Wound irrigated. Suppuration. 7th day, wound opened up. 10th day, temp. 102° F. Large discharge of pus from wound. Diarrhœa. 16th day, abscess found at back of tibia. Counter-opening. 19th day, knee-joint involved, opened and drained. Joint surfaces found roughened. 22nd day, incisions into thigh and below knee; pus evacuated. Extension to leg. 31st day, wounds still discharge. Diarrhœa. Tem-

perature high. 40th day, amputation in lower third of thigh as temperature still ranged high. Stump suppurated and temperature continued raised. Flaps sloughed in part. Food taken fairly. 64th day, temperature reached 106° F. Pus seen oozing from femoral vein. Femoral vein found at Poupart's ligament and ligatured. Contained white clot. Collapse. Death on 64th day. P.M.—Body fat. Left external iliac and common iliac veins blocked with adherent thrombus breaking down in the centre. Corresponding veins on opposite side also blocked but with healthy thrombus, while the thrombus reached as far as popliteal space. Some localised adhesions in pleuræ. Lungs emphysematous. Fibrous scars and calcareous nodules in apices. Large abscess in upper third of spleen. Liver and kidneys normal.

3. Male, æt. 26. Discharge from right ear since scarlet fever 18 years ago. Headache 14 days, also rigors and pain in right side of neck. Scanty discharge from right ear. No tenderness over mastoid. Puffy swelling below apex of mastoid. Optic neuritis in right eye. Temp. 101° F. Mastoid opened; pus found in cells. Sinus healthy. Jugular vein tied. Temperature fell. 7th day, temperature rose again. Mastoid again opened up and cleaned out. Temperature fluctuated in spite of treatment. Pulse weak; mouth dry. Wound sloughy. 11th day, slight right facial paralysis. Patient drowsy. Death on 13th day. P.M.—Extra-dural abscess on apex of posterior surface of mastoid surrounding internal auditory meatus and extending to foramen magnum. Bone in this situation dry and carious, and a track led through bone to carotid canal, which contained pus. Septic absorption appeared to have gone on after ligature of internal jugular by means of spinal veins. Sinuses healthy. No meningitis. Two pints of pus in right pleura. Small abscesses in lower lobes of both lungs. Peritoneum contained 1 pint of pus. Intestines healthy.

4. *Vesical calculus.*—Bladder symptoms 5 years. Urine contained pus. Stone measured $1\frac{5}{8}$ inches by lithotrite. Supra-pubic cystotomy. Peritoneum low and had to be raised from bladder. Stone extracted. Bladder sutured. Not watertight. Drain in external wound. Stone weighed just under 2 oz. Frequent dressings needed as urine came through wound. Catheter inserted into bladder through urethra and tied in. Bladder drained well. Catheter became plugged on 3rd day after operation and supra-pubic wound leaked. Catheter discontinued as it is frequently blocked by muco-pus. Temperature raised to 101·5° F. Bladder irrigated. Abscess at root of penis on 13th day after operation. Incised. No urine through abscess, all by supra-pubic wound. Rigor and temperature of 105° F. on 16th day after operation. Boracic bath 2 hours daily. No pelvic inflammation found. Temperature remained raised. Abscess cavity in perinæum found extending backwards along urethra and opened up behind scrotum. Boracic bath continued. Temperature assumed pyæmic character. Death on 46th day from admission. P.M.—Supra-pubic wound healthy. Multiple abscesses in bulbous portion of urethra. Prostate normal. Bladder showed no marked change. Pelvis of kidneys dilated. No evidence of suppurative nephritis. Spleen normal. Lymph over lower lobe of right lung. Numerous small pyæmic abscesses in both lungs.

SPECIAL TABLE IV.

SPECIAL TABLE IV.—*Fractures and Dislocations treated*

BONE.	Sex.		Age.								
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Not stated.
DISLOCATIONS.											
Inferior Maxilla—											
Bilateral	...	5	...	...	...	2	3	...	...	...	...
Unilateral	3	...	...	1	1	1	...	...	...	...	...
Clavicle—											
Sternal end	1	...	..	...	...	...	...	...	1	...	...
Acromial end	4	...	...	2	...	1	...	...	...	1	...
Humerus—											
Subcoracoid	22	11	...	...	2	7	8	7	1	7	1
Subglenoid	2	3	...	...	...	2	1	2	...	...	...
Nature not stated	2	3	...	...	...	...	...	1	1	3	...
Ulna and Radius—											
Backwards	10	1	...	6	2	...	2	...	...	...	...
Forwards	2	..	...	...	1	...	...	...	...	...	1
Radius	5	2	2	2	2	1	...	...	...	...	...
Ulna	1	1	...	...	1	...	1	...	...	...	...
Carpus	1	...	...	1	...	...	...	...	...	...	...
Thumb—											
Metacarpus	1	...	...	...	...	1	...	...	...	...	...
Proximal phalanx	5	...	...	...	...	2	2	...	...	1	...
Distal phalanx	4	...	...	...	...	1	1	...	1	1	...
Digits—											
Metacarpus	1	...	...	...	...	1	...	...	...	...	...
Proximal phalanx	...	2	...	...	1	1	...	...	...	...	...
Middle phalanx	...	1	...	...	...	1	...	...	...	...	...
Terminal phalanx	1	1	...	...	...	1	...	1	...	...	...
Great Toe—											
Terminal phalanx	1	...	...	...	...	...	1	...	...	...	...
Subastragaloid	1	...	...	...	...	...	...	...	...	...	1
FRACTURES.											
Malar	1	...	...	...	...	...	1	...	...	...	...
Nasal Bone	1	3	...	...	...	4	...	...	...	...	...
Inferior Maxilla	6	3	1	...	...	...	1	5	2	...	...

in Casualty Department, not admitted to Wards.

Side of body.			Remarks.
R.	L.	Not stated.	
...	...	...	
...	2	1	Yawning 1.
...	...	...	Anterior dislocation.
...	...	...	Direct violence 2; indirect violence 1.
13	20	...	Direct violence 8. Anæsthetic 5.
3	2	...	Direct violence 1. Anæsthetic 1.
3	2	...	
4	7	...	Direct violence 3; indirect violence 5. Anæsthetic 1. Backwards and inwards 1.
...	...	...	Fracture of internal condyle 1. Fracture of external condyle 1. Greenstick of ulna 1. Forwards 1; outwards 1.
4	3	...	Forwards 2; backwards 2; outwards 1. Fracture of internal condyle 2.
1	...	1	Backwards and inwards 1; not stated 1.
1	...	...	Backwards.
1	...	...	Direct violence 1.
2	3	...	Direct violence 3.
...	4	...	Direct violence 3. Compound 1.
...	1	...	Direct violence. 2nd and 3rd metacarpals backwards.
1	1	...	Direct violence. Index finger 1.
1	...	...	Direct violence. Ring finger.
...	2	...	Direct violence. Ring finger 2.
1	...	...	Backwards.
...	1	...	Direct violence.
1	...	...	Direct violence.
3	2	...	Comminuted 2.
5	2	2	Angle 1. Horizontal ramus 7.

SPECIAL TABLE IV.—*Fractures and Dislocations treated in*

BONE.	Sex.		Age.								
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Not stated.
FRACTURES—*continued.*											
Ribs	76	29	...	...	5	11	32	21	23	12	1
Scapula	6	2	...	...	2	2	2	1	...	...	1
Separation of acromion process	1	...	1	...	...	...	...	...	...	...	...
Clavicle	75	40	41	24	15	9	7	8	2	5	4
Humerus	40	23	9	13	13	5	4	4	7	8	...
Separation of upper epiphysis	2	...	1	...	1	...	...	...	...	...	...
,, of lower epiphysis	3	2	3	...	2	...	...	...	...	...	...
Radius and Ulna	56	17	17	30	19	1	3	2	1	...	...
Radius—											
Shaft	50	31	23	14	17	9	5	3	2	4	4
Colles'	6	13	...	...	3	1	4	...	6	5	...
Separation of epiphysis	11	1	3	2	7	...	...	...	...	...	...
Ulna—											
Shaft	17	8	7	3	5	1	3	...	2	3	1
Separation of epiphysis	1	1	1	1	...	...	...	...	...	...	...
Metacarpus	22	6	...	...	3	11	6	7	1	...	...
Phalanges	21	1	...	2	3	7	6	3	...	1	...
Tibia—											
Shaft	21	4	5	7	6	1	2	2	...	...	3
Separation of epiphysis	1	...	1	...	...	...	...	...	...	...	...
Fibula	42	8	1	2	9	10	12	6	6	...	4
Metatarsus	2	2	...	...	1	2	1	...	...	...	...
Phalanges	4	...	...	...	2	1	...	...	1	...	...

Casualty Department, not admitted to Wards—continued.

Side of body.			Remarks.
R.	L.	Not stated.	
40	56	9	2nd 2; 3rd 4; 4th 1; 5th 6; 6th 10; 7th 9; 8th 10; 9th 10; 10th 9; 11th 4. Separation of cartilage 1. Remainder unstated.
6	2	...	Acromion 2; spine 5; body 1.
...	1	...	
49	61	5	Comminuted 2. Greenstick 14. Between ligaments 1. Acromial end 1. Muscular action 1.
16	47	...	Upper third 19; middle third 3; lower third 12. T-shaped into elbow 3. Internal condyle 6; external condyle 4. Into elbow-joint 2. Comminuted 2. Greenstick 1.
1	1	...	
3	2	...	
25	47	1	Greenstick 21. Compound 3. Ulna comminuted 1.
46	34	1	Upper third 13; middle third 2; lower third 16. Greenstick 7. Impacted 13. Remainder unstated.
9	10	...	
5	7	...	
14	11	...	Upper third 5; middle third 2; lower third 2; remainder unstated. Greenstick 3. Comminuted 1. Olecranon 6. Dislocation of radial head forwards 1.
...	2	...	Upper 1; lower 1.
14	13	1	Thumb 3; index 9; middle 8; ring 3; little 7. Compound 1.
12	9	1	Thumb 6; index 9; middle 4; little 4. Compound 5. Amputation 2.
14	11	...	Upper third 3; middle third 1; lower third 5; internal malleolus 4; remainder not stated. Greenstick 1. Fibula also fractured 2.
1	...	...	Upper.
29	18	3	External malleolus 9; lower third 19; middle third 2; remainder not stated.
3	1	...	1st 1; 2nd 1; 3rd 1.
...	4	...	1st 2; 2nd 1; 3rd 1; 4th 2; 5th 1.

REPORT OF

THE MIDWIFERY DEPARTMENT

FOR 1894.

By ROBERT CORY, M.A., M.D., F.R.C.P.

The Junior Obstetric House Physicians for the year were Messrs. J. W. Hicks, C. S. Jaffé, P. C. Fenwick, E. G. E. Arnold, and W. E. F. Tinley.

From the 1st of January, 1894, to the 31st of December, 1894 (both dates inclusive), 2119 women were attended. Of these, 2092 resulted in single births and 27 in twin births. There were 8 cases of abortion among the single births.

In the following table the presentations of the children are classified :

	Among the single births.	Among the twin births.	Total.
Vertex	2028	40	2068
Breech	37	7	44
Superior extremities, including the shoulder	9	0	9
Head and hands	2	0	2
Inferior extremities	4	7	11
Face and brow	4	0	4
Abortions	8	0	8
	2092	54	2146

Of the 2119 cases attended—

330 were 1st confinements.
328 „ 2nd „
304 „ 3rd „
247 „ 4th „
226 „ 5th „
186 „ 6th „
160 „ 7th „
119 „ 8th „
94 were 9th confinements.
64 „ 10th „
33 „ 11th „
15 „ 12th „
8 „ 13th „
4 „ 14th „
1 was a 17th confinement.
2119

The following table gives the number of women confined

at each successive year of life; the youngest mother was 17 years, and the oldest 48:

At the age of	No. of women confined.	At the age of	No. of women confined.
17	1	33	89
18	10	34	101
19	44	35	57
20	86	36	65
21	109	37	45
22	123	38	60
23	144	39	66
24	132	40	37
25	125	41	12
26	120	42	24
27	116	43	9
28	131	44	8
29	105	45	3
30	126	46	2
31	67	48	1
32	101		2119

The FORCEPS were used in 51 cases. The reasons given for their use may be tabulated as follows:

Delay during 1st stage of labour . . . 29 { 18 contracted pelves. 11 inertia.

Delay during 2nd stage of labour . . 22 Tedious.

There were 20 cases of primiparæ among the 51 forceps cases, and 5 cases of rupture of the perinæum are reported, 4 of which happened among the primiparæ.

The following is a tabulated statement of the cases of PLACENTA PRÆVIA.

No.	Age of mother.	Confinement.	Sex of child.	Treatment.	Result to mother.	Result to child.	Placental position.
49	32	7	F.	Not stated	R.	S.	Partial.
139	32	7	M.	„	R.	S.	Marginal.
252	34	6	M.	„	R.	L.	Not stated.
1036*	38	11	M.	Version	Died	S.	„
1103	28	6	F.	Not stated	R.	S.	„
1199	23	1	M.	Version; shoulder presentation	R.	S.	Partial.
1812	19	1	F.	Feet presenting	R.	S.	Marginal.
1826	37	9	F.	Version	R.	S.	Not stated.
1914	27	5	M.	„	R.	S.	„
2061	38	4	M.	Version; breech presentation	R.	S.	„
2109	30	11	F.	Version	Died	S.	„
2278	29	3	M.	„	R.	S.	„
2416	29	6	M.	„	R.	S.	Partial.

* In this case there was cancer of the cervix.

Cases of Version.—Podalic version was resorted to in 16 cases:

5 for presentation of the shoulder;
1 for contracted pelvis;
1 for the head and hand;
1 for brow presentation; and
8 for placenta prævia.

Fifteen of the children were stillborn. Two of the mothers succumbed from hæmorrhage due to placenta prævia.

The breech presented in 37 cases among the single births, which gives a proportion of 1 in every 57·27. In 14 of these cases the children were stillborn, which is equivalent to a death-rate of 37·57.

Three maternal deaths are recorded during the year:

No.	Age.	Confinement.	Sex of child.	Result to child.	Interval between death of mother and birth of child.	Cause.
747	42	10	F.	Stillborn	36 hours	Labour obstructed by a large sessile fibroid tumour in the anterior wall of uterus.
1036	38	11	M.	„	A few hours	Placenta prævia hæmorrhage.
2109	30	11	F.	„	4 hours	Hæmorrhage from placenta prævia.

This gives a death-rate of ·14.

Of the Children.—The number of children born among the 2119 women attended during the year was 2146, there being 27 cases of twin births. The sexes of 1933 were 1049 males and 884 females. The sexes of 214 are not recorded.

There were 97 stillbirths, or 1 in 22·13 labours, *i.e.* 4·52 per cent.

The characters of the labours in which the stillbirths occurred are given below.

Natural labours, including cases of intra-uterine maceration	27
Abortions	8
Premature births	14
Breech presentations	14
Twin births	6
Funis presentations	3
Forceps	5

Placenta prævia	9
Shoulder with version	6
Malformations of fœtus	2
Eclampsia	1
Versions	2
	97

The following table gives particulars of the cases of the twin births:

No. in Maternity Book.	Age of mother.	No. of confinement.	Date of birth.	Sex.		Result to mother.	Result to children.		Presentation of children.	
				1st.	2nd.		1st.	2nd.	1st.	2nd.
2971	29	5	March 6	M.	F.	R.	R.	R.	Vertex	Vertex
2972	32	4	Feb. 3	F.	F.	R.	R.	R.	„	„
3040	20	1	March 2	M.	M.	R.	R.	R.	„	„
69	38	5	Feb. 5	M.	F.	R.	R.	R.	„	„
272	30	4	April 16	M.	F.	R.	R.	S.	„	„
316	32	4	March 29	F.	F.	R.	R.	R.	„	„
468	27	2	June 17	F.	F.	R.	R.	R.	„	Feet
556	27	2	May 14	F.	F.	R.	R.	R.	Feet	„
631	30	3	March 28	M.	M.	R.	S.	R.	Vertex	Vertex
708	19	1	April 8	M.	F.	R.	S.	S.	„	„
712	34	3	July 16	F.	F.	R.	R.	R.	Breech	Breech
766	41	14	July 6	M.	F.	R.	R.	R.	„	Vertex
794	25	1	June 20	F.	F.	R.	R.	R.	Vertex	„
853	45	11	June 10	M.	F.	R.	R.	R.	Feet	Feet
949	31	4	July 23	M.	F.	R.	R.	R.	Vertex	Vertex
1174	33	8	June 13	F.	F.	R.	R.	S.	„	„
1208	39	7	Sept. 16	M.	M.	R.	R.	R.	„	Breech
1262	27	7	Aug. 27	M.	F.	R.	R.	R.	„	„
1306	21	1	Sept. 15	M.	F.	R.	R.	R.	„	Vertex
1435	46	10	Sept. 25	M.	F.	R.	R.	S.	„	„
1445	37	8	Sept. 7	M.	F.	R.	R.	R.	„	„
1519	24	1	Oct. 13	M.	M.	R.	R.	S.	„	„
1529	30	4	Oct. 12	F.	F.	R.	R.	R.	„	„
1604	31	3	Dec. 11	F.	M.	D.	R.	R.	„	„
1654	26	6	Oct. 3	F.	F.	R.	R.	R.	Breech	Breech
2224	25	3	Dec. 14	M.	F.	R.	R.	R.	Feet	Feet
2420	25	4	Dec. 20	F.	F.	R.	R.	R.	Vertex	Vertex

REPORT

OF THE

IN-PATIENT DEPARTMENT FOR DISEASES OF WOMEN

FOR THE YEAR 1894.

By WALTER W. H. TATE, M.D., M.R.C.P.

In the arrangement of the following report the same general plan has been adopted as in previous years. The first part will be seen to include four General Tables giving (1) a general statement as to the number of patients admitted during the year, with the results of treatment, (2) a general classification of the diseases from which the patients suffered, (3) the total number of abdominal sections and major operations *per vaginam* performed during the year, and (4) the causes of death in the fatal cases. The second part of the report deals with the abdominal sections that have been performed during the year, and consists of three Special Tables, each followed by abstracts of one or more cases of special interest. The first of these Special Tables includes laparotomies for diseases of the ovary, the second those for diseases of the Fallopian tube, and the third operations performed for conditions not included in the first two Special Tables.

Table I.

General Statement of Patients in Adelaide Ward.

Number of Beds in Ward (including small Ward) 21
Number of Patients in Ward, Jan. 1st, 1894 16
" " " Dec. 31st, 1894... 14
" " discharged or who died during 1894:

		Rate per cent.
Cured	121 ...	49·39
Relieved	47 ...	30·20
Unrelieved or other causes	32 ...	13·06
Died	18 ...	7·35
Total	245 ...	100·00

Average number of days of each patient's stay in hospital—26·37.

TABLE II.—*General Table of Diseases.*

DISEASE.	Number of cases.	Age.						Duration of residence.					Cured.	Relieved.	Unrelieved.	Died.	REMARKS.
		10–20	–30	–40	–50	–60	Above 60	Under 1 wk.	1–2 weeks	2–4 weeks	1–2 months	Above 2 mos.					
I. DISEASES OF OVARY.																	
Carcinoma . . .	2	...	...	1	1	...	...	2	...	...	...	...	...	...	2	...	In 1 case temporary relief was afforded by tapping the abdomen and removing 11 pints of ascitic fluid. In the other case the patient's mental condition was impaired, and she was unwilling to submit to an operation. After leaving the hospital she had a copious discharge of matter from the rectum, with relief of symptoms; the tumour, however, was about the same size 5 months later.
Sarcoma	1	...	1	...	...	...	...	...	...	...	1	...	1	...	...	...	Removed by abdominal section.
Cysts:																	
a. Simple and multiple	23	2	6	7	1	5	2	...	3	3	17	...	19	1	2	1	20 cases were operated upon, of which 19 were cured. The fatal case occurred 1 month after abdominal section in a patient aged 68, the death being due to collapse of the lower lobe of both lungs, with broncho-pneumonia. In 1 of the 2 cases unrelieved, operation was deferred in consequence of the extremely feeble condition of the patient, caused by excessive hæmorrhage from a fibroid tumour of the uterus, which was present in addition to a very large ovarian tumour; in the other case patient was discharged for insolent behaviour. 1 case was relieved temporarily by tapping, as the patient was unable to remain in the hospital.
b. Suppurating . .	6	...	2	4	...	...	...	...	2	...	3	1	4	...	...	2	Abdominal section was performed in all the cases. Of the 2 fatal cases, 1 died on the 6th day from peritonitis, the other was admitted in a collapsed condition, and died 12 hours after the operation.
c. Papillomatous .	7	...	...	1	4	1	1	...	...	...	6	1	6	...	...	1	All removed by abdominal section.

d. Carcinomatous	1	...	...	...	1	...	...	...	...	...	1	...	...	1	...	...	Patient was relieved after removal of tumour by abdominal section. 4 months later, however, she presented herself with a recurrent growth reaching up to level of umbilicus.
e. Dermoid	2	...	...	1	...	...	1	...	...	...	2	...	2	...	...	...	Abdominal section in each case.
II. Diseases of Fallopian Tubes.																				
Salpingitis	16	2	8	6	...	...	...	...	2	9	3	2	2	14	...	...	2 of these cases were treated by abdominal section; the rest were relieved by rest in bed.
Hydrosalpinx	1	...	...	1	...	...	...	...	...	...	1	...	...	...	...	1	Abdominal section.
Pyosalpinx	3	...	...	2	1	...	...	...	1	...	1	1	2	...	...	1	Abdominal section in all 3 cases. The fatal case died from shock 3 hours after the operation.
Tubercular salpingitis	1	...	1	...	...	...	...	...	...	...	1	...	1	...	...	...	Abdominal section was performed, and the tubercular disease was found affecting both Fallopian tubes. On the right side there was also a large suppurating cyst of the right ovary.
Tubal gestation	6	...	1	5	...	...	...	...	1	1	4	...	4	...	...	2	All treated by abdominal section.
III. Diseases of the Pelvic Peritoneum and Cellular Tissue, and of the Broad Ligaments.																				
A. *Hæmatocele.*																				
a. Intra-peritoneal	3	...	1	1	1	...	...	...	...	...	1	2	3	...	...	...	In 2 of the cases there was distinct history pointing to tubal abortion as the cause of the hæmorrhage. In all these cases the tumour gradually diminished in size with rest in bed.
b. Extra-peritoneal	3	...	3	...	...	...	...	...	...	...	3	...	3	...	...	...	Gradual improvement with rest in bed.
B. *Inflammation.*																				
a. Pelvic peritonitis	5	...	3	1	1	...	...	1	2	2	...	...	1	4	...	...	2 cases followed confinement, 2 were due to gonorrhœa, and in 1 the cause was not evident. In 1 case the uterus was retroverted and fixed by adhesions, and the ovaries prolapsed and adherent; the patient suffered from very severe dyspareunia. Abdominal section was performed, and the adhesions separated.
b. Intra-peritoneal abscess	2	...	...	2	...	...	...	...	...	...	2	...	2	..	...	...	1 case followed a miscarriage, and the abscess formed discharged itself by a fistulous communication into the rectum, with complete relief of symptoms. The other case followed confinement, and was treated by abdominal section.

TABLE II—*continued.*

DISEASE.	Number of cases.	Age.						Duration of residence.					Cured.	Relieved.	Unrelieved.	Died.	REMARKS.
		10–20	–30	–40	–50	–60	Above 60	Under 1 wk.	1–2 weeks	2–4 weeks	1–3 months	Above 3 mos.					
III. DISEASES OF THE PELVIC PERITONEUM AND CELLULAR TISSUE, AND OF THE BROAD LIGAMENTS —*continued.*																	
B. *Inflammation*—cont.																	
c. Pelvic cellulitis and abscess	3	...	1	1	1	...	...	...	...	...	1	2	3	...	...	...	All 3 cases followed confinement, and in each case the abscess was opened above Poupart's ligament and drained. In 1 of the 3, however, the suppuration was deeply seated in the pelvic cellular tissue, and as it seemed likely that it might be intra-peritoneal, an exploratory median incision was first made, and the nature of the case determined.
d. Subserous cyst of broad ligament	1	...	1	...	...	...	...	...	1	...	...	...	1	...	...	...	Cyst was ruptured during examination.
IV. DISEASES OF UTERUS AND CERVIX.																	
Endometritis . . .	26	...	13	7	6	...	...	4	6	10	5	1	11	13	1	1	7 of the cases followed confinements, 3 followed abortion, 3 were due to gonorrhœa, 6 were cases of villous endometritis, and in 7 the cause was undetermined. Dilatation with subsequent curetting or digital exploration was the method of treatment adopted in each case, in 5 a tent being used as a preliminary means of dilatation.
Endocervicitis . . .	4	...	...	3	1	...	...	...	2	1	1	...	3	1	...	...	2 of the cases followed confinements, and in 2 the cause was not determined.
Fibro-myoma . . .	15	...	...	6	7	1	1	2	3	3	7	...	5	6	1	3	In 5 cases abdominal hysterectomy was performed, 2 of which ended fatally; oöphorectomy was the operation selected in 2 cases, myomectomy in 1 case. In 3 cases an exploratory

																		abdominal section was made, in 2 of which the fibroid was found adherent by vascular adhesions to the surrounding viscera, and its removal impossible; in the 3rd case the fibroid was growing from the cervix and was causing pressure on ureters, but owing to the patient's condition on admission it was not thought advisable to remove the tumour. 3 cases were relieved by rest in bed, and 1 by dilatation and curetting.
Polypus, fibroid	3	...	...	1	1	1	...	...	2	1	...	...	3	...	...	...	All removed by scissors. In 1 case the polyp was sloughing.
Polypus, mucous	3	...	...	1	1	1	...	...	...	3	...	...	3	...	...	...	In 2 cases removed by scissors; in 1 case twisted off.
Carcinoma of cervix	14	...	...	5	5	2	2	5	5	1	3	...	...	4	10	...	In 2 cases vaginal hysterectomy was performed; 1 case was treated by supra-vaginal amputation of the cervix; and in 1 case masses of growth were removed with scissors and the cautery applied to the base. In 10 cases the disease was too extensive for operative interference.
Anteflexion	6	...	5	1	...	...	...	...	3	2	1	...	1	5	...	...	All the cases suffered from dysmenorrhœa. 1 case, in which menorrhagia was also present, was treated by dilatation and curetting.
Retroversion	6	...	5	1	...	...	...	2	3	1	...	...	...	5	1	...	
Hypertrophy of cervix	4	1	1	1	1	...	...	...	...	2	1	1	4	...	...	...	All the cases affected the supra-vaginal portion of the cervix, and were secondary to prolapse. Amputation of cervix was the treatment adopted in each case, in addition to which a posterior colporrhaphy was performed in 1 case.
V. Diseases of Vagina, Vulva, &c.																	
Atresia vaginæ	1	1	...	...	...	...	...	...	...	1	...	...	1	...	...	...	An incision was made through the septum and 36 ounces of retained menstrual fluid allowed to flow away gradually. A glass dilator was introduced at the end of a week.
Vaginitis	1	...	...	1	...	...	...	...	...	1	...	...	1	...	...	...	
Carcinoma of vagina	1	...	...	1	...	...	...	1	...	...	...	...	...	...	1	...	Disease infiltrated the whole of the posterior vaginal wall so extensively that operative treatment was inadmissible.
Laceration of vagina	1	...	...	...	...	...	1	...	...	1	...	...	1	...	...	...	The laceration was caused by introduction of pessary.
Chancre of labium minus	1	...	1	...	...	...	...	...	...	...	1	...	...	1	...	...	
Epithelioma of ditto	1	...	...	...	...	...	1	...	...	1	...	...	...	1	...	...	Removed by operation.
Papilloma of labium majus	1	...	1	...	...	...	...	...	...	1	...	...	1	...	...	...	Removed by operation.
Epithelioma of ditto	1	...	...	...	...	...	1	...	...	...	1	...	...	1	...	...	Removed by operation.
Cyst of Bartholin's duct	1	...	...	...	...	1	...	...	...	1	...	...	1	...	...	...	Incised and drained.

TABLE II—*continued.*

DISEASE.	Number of cases.	Age.						Duration of residence.				Cured.	Relieved.	Unrelieved.	Died.	REMARKS.
		10–20	–30	–40	–50	–60	Above 60	Under 1 wk.	1–2 weeks	2–4 weeks	1–2 months	Above 2 ms.					
V. DISEASES OF VAGINA, VULVA, &c.—*continued.*																
Vesico-vaginal fistula	1	...	...	1	...	...	...	...	...	...	1	...	...	...	1	...	The fistula was very extensive and reached up to the margin of the cervix, and the vaginal wall around was in a very unhealthy condition, and very cicatricial. An attempt was made to close the opening, but the operation had to be abandoned.
Abscess in recto-vaginal septum	1	...	...	1	...	...	...	...	1	...	...	...	1	...	...	...	Abscess discharged itself by an opening into the vagina, with complete relief of symptoms.
Urethral caruncle	3	...	...	...	2	1	...	...	2	1	...	...	3	...	...	...	Removed by scissors, followed by application of cautery to the [base.
Ruptured perinæum	9	...	6	2	1	...	...	1	1	4	3	...	7	...	2	...	7 cases were operated upon and cured; 1 refused any operative treatment; and in another case the patient was found to be 3 months pregnant, so that operation was deferred.
VI. PREGNANCY AND ITS ACCIDENTS.																
Pregnancy	3	1	1	1	...	...	...	...	1	1	1	...	...	...	3	...	In 1 case abdominal section was performed, as from the history and physical examination the tumour was thought to be a dermoid cyst of the ovary with an early pregnancy. At the operation the whole tumour was found to be uterus, the latter being remarkably anteflexed.
Puerperal eclampsia	2	...	1	1	...	...	...	...	1	...	1	...	1	1	...	...	1 case occurred in a multipara at the 8th pregnancy. The fits began during labour, but were not frequent; labour was hastened by introduction of de Ribes' bag, followed by version. Patient had no more fits after birth of child. The urine was scanty in amount, but there was no albumen. The 2nd case was a primipara, in whom abortion occurred at the 6th month, accompanied by severe and frequent fits, which continued for about 24 hours after delivery. In this case the albuminuria present on admission persisted up to time of patient's discharge from hospital.

Puerperal tetanus	1	1						1								1	Labour was prolonged, and child was delivered by forceps. Spasm of muscles of back and neck began on the 8th day after confinement. She was admitted to Dorcas Ward on the 10th day, and died on the 11th day from exhaustion.
Secondary hæmorrhage	1			1							1		1				Hæmorrhage began on 11th day after delivery, and recurred at intervals up to time of her admission to hospital on 30th day. No further hæmorrhage occurred after her admission.
Fibroid tumour of cervix complicating pregnancy	1				1			1								1	Abdominal section was performed in this case. The fœtus was removed by Cæsarean section, and the appendages were afterwards removed. Death occurred from shock 18 hours after operation.
Threatened abortion	1		1					1					1				
Abortion	4		2	2				1	2	1			4				In 2 cases the abortion was completed before admission; in the other 2 it occurred spontaneously while in hospital.
Incomplete abortion	12		5	7				2	3	7			12				All the cases treated by dilatation with curetting or exploration of the interior of the uterus with the finger.
Septicæmia following abortion	1		1					1								1	On the day before her admission, patient was seized with severe pain in the abdomen with vomiting, which continued after her admission. Five days later she aborted, and in the evening of the same day had a rigor with temp. 105°. She rapidly got weaker and collapsed, and died 48 hours after the abortion took place from acute septicæmia.
VII. Various.																	
Menorrhagia	2	1			1			1	1				2				
Pelvic neuralgia	4		1		3			1	3				4				
Mitral disease	1		1						1				1				Previously an in-patient for abortion; admitted again for rest.
Cirrhosis of liver	1			1						1			1				
Febricula	1			1						1		1					
Enteric fever	1		1					1								1	Patient was admitted for incomplete abortion. On examination some sloughing placenta was found presenting through the external os and removed. Patient was extremely ill, with distended and tympanitic abdomen, and temp. 105° F. on night of admission. She got gradually weaker, and died four days after admission. At the autopsy general purulent peritonitis was found, due to perforation of a typhoid ulcer.
Renal colic	1			1				1						1			
Movable kidney	1			1					1				1				

TABLE II—*continued.*

DISEASE.	Number of cases.	Age.						Duration of residence.							REMARKS.
		10–20	–30	–40	–50	–60	Above 60	Under 1 wk.	1–2 weeks	2–4 weeks	1–2 months	Above 2 mos.	Cured.	Relieved.	Unrelieved.	Died.	
VII. VARIOUS—*continued.*																	
Wandering spleen	1	...	1	...	...	...	...	...	...	...	1	...	...	...	1	...	The tumour formed by the spleen was extremely movable, and frequently was found lying in the pelvis and simulating an ovarian tumour. Exploratory laparotomy was performed, and the nature of the case determined.
Partial obstruction	1	...	...	...	1	...	...	...	1	...	...	...	1	...	...	...	The symptoms of obstruction were due to adhesions of intestine following abdominal section for suppurating ovarian cyst. Patient was entirely relieved by means of medical treatment.
Typhlitis	1	...	1	...	...	...	...	...	1	...	...	...	1	...	...	...	
Carcinoma of stomach	1	...	...	1	...	...	...	1	...	...	...	...	...	...	1	...	Transferred to Medical ward.
Of cæcum	1	...	...	...	...	1	...	...	1	...	...	...	...	...	1	...	Transferred to Surgical ward.
Of rectum	1	...	1	...	...	...	...	...	...	...	1	...	...	...	1	...	Transferred to Surgical ward.
Of omentum	3	...	1	...	1	...	1	...	1	1	1	...	...	...	2	1	In 1 case the tumour occurred in a patient from whom a cystic adenoma of the ovary had been removed 2 years previously. In the fatal case abdominal section was performed, as it was thought that the tumour might prove to be papilloma of ovary. Nothing could be removed, and patient gradually lost ground from extension of the disease. In the third the disease was very extensive, and patient markedly cachectic.
Tubercular enteritis	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	1	In this case the intestine had become adherent to the bladder, and a fistulous communication had formed between the two, causing cystitis.
Hernia after laparotomy	1	...	...	1	...	...	...	...	1	...	...	...	...	...	1	...	
Debility	1	...	1	...	...	...	...	...	1	...	...	...	...	1	...	...	
Nil	6	...	3	2	1	...	...	1	4	1	...	...	...	6	...	...	

TABLE III.—*Operations performed during the Year.*

Abdominal section:			
Cystic adenoma of ovary			19
Papillomatous cyst of ovary			7
Parovarian cyst			1
Suppurating cyst of ovary			6
Dermoid cyst of ovary			2
Carcinomatous cyst of ovary			1
Sarcoma of ovary			1
Salpingitis			2
Hydrosalpinx			1
Pyosalpinx			3
Tubercular salpingitis			1
Tubal gestation			6
Removal of uterine appendages for fibroid tumours			2
Hysterectomy for uterine fibroids			5
Myomectomy for uterine fibroid			1
Cæsarean section with oöphorectomy			1
Exploratory incision:			
Chronic pelvic peritonitis	1		
Intra-peritoneal abscess	1		
Pelvic abscess (secondary to pelvic cellulitis)	1		
Fibroid tumour of uterus	2		
Large fibroid tumour of cervix	1		
Pregnancy	1		
Wandering spleen	1		
Carcinoma of omentum, &c.	1	=	9
			68
Pelvic abscess (secondary to pelvic cellulitis)			3
Vaginal hysterectomy for cancer of cervix			2
Supra-vaginal amputation of cervix:			
(1) For cancer			1
(2) For hypertrophic elongation			4
Polypus uteri (fibroid)			3
„ „ (mucous)			3
Imperforate hymen			1
Vesico-vaginal fistula			1
Ruptured perinæum			9
Total			95

Table IV.—*Causes of Death in Fatal Cases.*

Puerperal tetanus	1
Exhaustion due to tubercular enteritis, with fistulous communication between intestine and bladder	1
Peritonitis: (1) secondary to enteric fever; (2) complicating abortion	2
Septicæmia following dilatation and exploration of uterus for severe and recurrent hæmorrhage	1
Shock and collapse after Cæsarean section for large fibroid tumour of cervix complicating pregnancy; after abdominal section for (1) suppurating cyst of ovary; (2) pyosalpinx; (3) adherent fibroid tumour of uterus; (4) tubal abortion; (5) removal of placenta and suppurating sac in a case of extra-uterine gestation, in which a living child at term had been delivered by abdominal section twenty-five days before	6
Collapse of lung and broncho-pneumonia one month after ovariotomy in a patient aged 68	1
Peritonitis after abdominal section for (1) suppurating cyst of ovary; (2) gangrenous fibroid tumour of uterus	2
Intestinal obstruction after abdominal section for hydrosalpinx	1
Suppurative interstitial nephritis secondary to cystitis due to pressure of fibroid tumour of cervix on bladder and ureters	1
Exhaustion after abdominal section for (1) carcinoma of omentum, &c.; (2) papillomatous tumour of ovary	2
Total	18

Abdominal Section, including Ovariotomy.

During the past year the total number of abdominal sections performed was sixty-eight, and of these thirty-seven were cases of ovariotomy. Of the latter thirty-three were cured and four died. As regards the cause of death in the fatal cases, it will be seen that one case, died of shock thirteen hours after a very severe and difficult operation for suppurating cyst of the right ovary with a secondary intra-peritoneal abscess; a second case, following ovariotomy in a rather feeble subject sixty-eight years of age, was due to collapse of the lung and broncho-pneumonia; a third case ended fatally from peritonitis after removal of a suppurating cyst of the left ovary; and the remaining case was due to gradual exhaustion two months after operation for papillomatous tumour of left ovary, with secondary infection

of peritoneum. An abstract of this case is given, and also of No. 18 in the Special Table, which is a case of papillomatous cyst of the right ovary occurring in a patient from whom a tumour of similar nature had been removed growing from the opposite ovary fifteen months previously. The result of this case shows the desirability of removing the opposite ovary in cases of papillomatous diseases affecting one ovary, at any rate in patients near the menopause. It will be noticed that one operation was performed for a large spindle-celled sarcoma of the ovary in a patient aged twenty-four years; she made a good recovery, and remained free from any recurrence of the disease ten months after the operation. Case No. 29 was a very large multilocular cystic adenoma weighing 22½ lbs., which was removed from a young girl of twenty. The tumour was made up of an enormous number of small cysts, and required an incision from the pubes nearly up to the ensiform cartilage for its removal.

The second Special Table includes thirteen laparotomies for disease of the Fallopian tubes, nine of which were cured. Four of the latter were cases of ruptured tubal gestation, in three the effused blood being free in the peritoneal cavity, and in the remaining case the blood being encysted, with formation of a pelvic hæmatocele. In one of the cases the rupture occurred after patient's admission to the hospital, and was associated with a hæmatoma of the broad ligament on the opposite side. Four cases in this Table ended fatally, two of these being the result of tubal gestation. One was a case in which an abdominal gestation secondary to tubal gestation had gone on to full term, and a living child was removed by abdominal section, the placenta and membranes being left *in situ* and the wound closed; twenty-six days later a second operation had to be performed owing to suppuration having occurred in the sac, and the placenta and part of the sac wall with a considerable quantity of puriform fluid was removed. The patient died from shock seven hours after the completion of the operation. The other case occurred in a patient aged thirty-six, who was admitted in a state of extreme collapse owing to internal hæmorrhage as the result of tubal gestation. As the patient had rallied somewhat on the morning following

her admission, the abdomen was opened and a large amount of blood was removed from the peritoneal cavity, together with a homogeneous clot containing a small embryo within an amniotic sac. Patient rallied for a few hours after the operation, but later on the breathing became embarrassed, and she died ten hours after the operation. Of the other two fatal cases included in this Table, one was due to shock following an operation for double pyosalpinx with intra-peritoneal abscess, the other was due to intestinal obstruction caused by kinking of the bowels from adhesions twenty-four days after an operation for hydrosalpinx.

Of the eighteen cases contained in the third Special Table five were cases of abdominal hysterectomy. In the report for 1893, the first case of abdominal hysterectomy in which the stump was treated by the intra-peritoneal method was recorded. All the five cases included in the present report were treated by this method, an account of which is given in the report of case No. 2. Three of the cases were cured, and two died. One of the two fatal cases died from shock twelve hours after operation, the latter being attended with very severe hæmorrhage owing to the tumour being adherent to the whole posterior wall of the pelvis; the other case died from peritonitis following removal of a large gangrenous fibroid tumour of the uterus in a patient aged sixty-one. In this case the drainage through the cervical canal left in the stump was not satisfactory, and blood accumulated under the peritoneal flaps which covered in the stump; this underwent decomposition, and so gave rise to the fatal peritonitis. In subsequent cases special care has been taken to ensure complete drainage through the cervical canal, so as to prevent any accumulation of blood or clots under the surface of the flaps. As regards the first of the two fatal cases just mentioned, the result cannot be attributed to the new method of treatment of the stump, but was due to the necessarily severe nature of the operation caused by the very vascular adhesions of the uterus to the posterior wall of the pelvis. The results of the other three cases have been extremely satisfactory, the main advantages of the intra-peritoneal treatment of the stump being the absence of the great discomfort often caused by the tension

on the stump in the old method of treatment, the considerably shortened period of convalescence, and the diminished tendency to the development of ventral hernia, which is not an uncommon sequela where the clamp is used.

Two cases of oöphorectomy for fibroid tumour of the uterus, and one case of myomectomy in a patient two months pregnant, were performed during the year; all three recovered. In another case a patient was admitted with cystitis caused by the pressure of a fibroid tumour of the cervix on the neck of the bladder and ureters. An exploratory laparotomy was performed, and the tumour was found filling up the whole pelvis and quite immovable. The condition of the patient was so bad that it was not thought justifiable to attempt removal of the tumour. A detailed report of case No. 14 is given in which Cæsarean section and oöphorectomy were performed for a large fibroid tumour of the cervix complicating pregnancy at the fifth month. The operation was an extremely difficult one, owing to the pregnant uterus being pushed backwards and to the right by the tumour, which had grown upwards into the abdomen; the patient died from shock sixteen hours after the operation.

The last fatal case in this Table was one in which an exploratory laparotomy was performed for ascites with a solid tumour situated in the lower part of the abdomen in a patient aged twenty-eight. It was thought that the mass might be a papillomatous tumour of the ovary, but it proved to be carcinoma of the omentum involving intestine. Patient gradually lost ground, and died from extension of the disease seventeen days after the operation.

It will be noticed in looking at the results of the abdominal sections during the year 1894, that the mortality has been very much in excess of that which obtained in previous years. The cause of this increase is to be attributed to the unusually large proportion of severe cases requiring operative treatment which have been admitted to the ward during the year. The operations have been carried out on the same lines as in previous years, and the after-treatment of the cases has undergone practically no change.

It may be mentioned here that during the past two years the use of the glass drainage-tube and of the douche for

the peritoneal cavity has been much less frequent. Thus, if we compare the cases included in the first two Special Tables for the years 1892, 1893, and 1894, we find that whereas in 1892 out of 38 abdominal sections the drainage-tube was used in 76 per cent. of the cases, and the douche in 62 per cent., in 1893 out of 36 cases the ratio had diminished to 50 per cent. and 44 per cent. respectively, and in 1894 out of 50 cases the drainage-tube and douche were each used in only 20 per cent.

The occurrence of ventral herniæ after abdominal sections has been a cause of disappointment to most surgeons after operations in other respects quite successful, and it is also a source of great discomfort and serious risk to the patient. There is little doubt that the frequency of this sequela, where the after-history of patients is followed up, will be found much greater than is generally imagined. In order to guard against the occurrence of hernia, or at least to diminish its frequency, a buried continuous catgut suture has been used to bring together the edges of the aponeurosis covering the rectus muscle. This suture is introduced after the deep silkworm-gut sutures, going through the whole thickness of the abdominal walls, have been passed. With the exception of cases where drainage has been used, or where owing to the patient's condition or for some other reason it was thought inadvisable to further prolong the operation, this buried suture has been almost invariably used. Up to the time of writing this report, no patient in whom this method of suturing has been adopted has presented herself at the hospital on account of hernia. It is of course too early yet to speak with certainty as to results, but in view of the fact that the rectal aponeurosis is the strongest layer in the abdominal wall, it is not too much to expect that the direct apposition of the edges of this layer will be an additional source of strength to the abdominal wall, and a further safeguard against hernia.

Special Table I.—*Abdominal Section for Ovarian or Broad-ligament Tumours.*

No.	Name.	Residence.	Age.	Civil condition	Date of operation.	Nature, &c., of tumour.	Adhesions.	Condition and treatment of other ovary.	Glass drainage tube.	Peritoneum flushed.	Result.	Remarks.
					1893							
1	S. S.	Camberwell	31	M.	Nov. 24	Cystic adenoma of right ovary; right hydrosalpinx	Extensive adhesions to broad ligament	Apparently normal, but surrounded by adherent coils of intestine	No	No	R.	The tumour had grown between the layers of the broad ligament from which it was enucleated. Patient's convalescence was delayed owing to an attack of cellulitis beginning in stump of right broad ligament.
2	S. V.	Brixton	46	S.	Dec. 30	Carcinomatous cyst of the right ovary, ascites; pleuritic effusion	Slight adhesions in the pelvis	Normal	No	No	R.	Patient made a good convalescence after operation and was discharged on 5th Feb., 1894. On 20th April, 1894, she came up again on account of pain in abdomen, and was found to have a recurrence of the growth reaching up to level of umbilicus.
					1894							
3	F. M.	Lambeth	15	S.	Jan. 1	Multilocular cyst of both ovaries	None	See "Nature of tumour"	No	No	R.	Uninterrupted recovery.
4	E. W.	Wimbledon	24	S.	Jan. 11	Sarcoma of left ovary (large spindle-celled)	None	Normal	No	No	R.	Patient presented herself at the hospital in Oct., 1894, and was then perfectly well.

No.	Name.	Residence.	Age.	Civil condition	Date of operation.	Nature, &c., of tumour.	Adhesions.	Condition and treatment of other ovary.	Glass drainage tube.	Peritoneum flushed.	Result.	Remarks.
5	E. G.	Streatham Hill	68	W.	Feb. 1	Multilocular cyst of left ovary	Slight to pelvic wall, and anterior abdominal wall; a few firmer bands	Atrophied	No	No	D.	Patient was extremely ill on admission owing to persistent vomiting for one week before admission. Symptoms were relieved by tapping cyst on 21st Jan. She made fair progress for 10 days after operation on Feb. 1, after which difficulty in breathing supervened, and she gradually lost ground, and died on Feb. 19th.
6	L. C.	Northampton	22	S.	Feb. 26	Suppurating ovarian cyst of right side; rupture; secondary intra-peritoneal abscess. Left salpingitis, with cystic ovary	Universal to intestines, omentum, pelvic wall, &c.	See "Nature of tumour"	Yes	Yes	D.	Patient died from shock 13 hours after operation. For full report of case see "Obst. Transactions,' vol. xxxvi, page 291.
7	H. W.	Sydenham	40	M.	March 3	Suppurating cyst of right ovary, secondary to salpingitis	Universal adhesions to pelvic wall, intestines, back of uterus, &c.	Normal	48 hours, then rubber tube	No	R.	Patient made an uninterrupted recovery, except for the persistence of a sinus in the track of the drainage. She was seen on April 2nd, 1895, and was then perfectly well, and about 5 months pregnant. There was still a small sinus.
8	J. O.	Westgate	51	S.	March 15	Unilocular cyst of right ovary; twisting of pedicle; hæmorrhage into cyst	Adhesions to omentum and vermiform appendix	Normal	No	No	R.	Normal convalescence.
9	C. M.	Clapham	38	M.	April 12	Dermoid cyst of left ovary	None	A little enlarged and cystic; one cyst punc-	No	No	R.	Normal convalescence.

												following the operation.
11	S. S.	Brockley	53	M.	April 26	Multilocular cyst of right ovary; small cyst of left ovary	None	See "Nature of tumour"	No	No	R.	Patient was troubled somewhat with bronchitis after the operation; otherwise the convalescence was uninterrupted.
12	A. F.	Boston, Lincolnshire	56	M.	April 26	Papillomatous cyst of both ovaries; ascites	Slight adhesions to pelvic wall	See "Nature of tumour"	No	No	R.	Patient had been tapped 13 times at intervals of 3 or 4 months before admission, and had œdema of thighs and of labia majora. She made an excellent recovery after the operation.
13	S. D.	St. Albans	40	M.	May 3	Unilocular cyst of right ovary	Firm adhesions to surrounding parts, including uterus and bladder	Not recorded	No	No	R.	Patient was in Adelaide Ward in April, 1888, for hæmatosalpinx on right side. She had a normal convalescence after operation of May 3.
14	A. C.	Edmonton	22	M.	May 10	Multilocular cyst of right ovary	None	Normal	No	No	R.	Normal convalescence.
15	L. C.	Sticker, Cornwall	55	W.	May 10	Multilocular cyst of left ovary; right ovary atrophied and flattened out over surface of tumour	Adhesions to right ovary and tube	See "Nature of tumour"	24 hours	Yes	R.	Made an excellent recovery. The temperature after operation only on one occasion reached 100° F., viz. on the evening of the third day.
16	A. W.	St. Albans	19	S.	May 17	Cystic adenoma of right ovary	None	Normal	No	No	R.	Patient was admitted for congenital hypertrophy of cervix, and after her admission it was discovered that she also had an ovarian cyst. The latter was removed, and she made an excellent recovery. See also "Diseases of uterus."

No.	Name.	Residence.	Age.	Civil condition.	Date of operation.	Nature, &c., of tumour.	Adhesions.	Condition and treatment of other ovary.	Glass drainage tube.	Peritoneum flushed.	Result.	Remarks.
17	S. S.	Torquay	66	W.	May 28	Dermoid cyst of right ovary (multilocular)	None	Atrophied	No	No	R.	Got up on 14th day after operation; condition most satisfactory.
18	M. V.	Bournemouth	46	M.	June 7	Papillomatous cyst of right ovary (unilocular)	A few old firm adhesions to surrounding parts	See "Remarks"	No	No	R.	Patient was operated upon in Adelaide Ward on March 28, 1893, for papillomatous tumour of left ovary with ascites. See "Abstract."
19	A. W.	Cuckfield	29	S.	June 14	Multilocular cyst of right ovary	Slight adhesions at lower part of tumour	Normal	No	No	R.	Uninterrupted recovery.
20	H. D.	Peckham Rye	44	S.	June 21	Multilocular cyst of left ovary; subperitoneal fibroid tumours of uterus	None	Normal, removed	No	No	R.	Normal convalescence, with the exception of some superficial suppuration in the wound. Sinus quite closed by beginning of September. Patient presented herself in October looking perfectly well.
21	R. H.	Eccleston Square	37	M.	June 28	Suppurating cyst of left ovary, secondary to purulent salpingitis	Dense adhesions to uterus, rectum, pelvic wall, &c.	Normal, but adherent over its posterior surface	20 hours	Yes	D.	Patient's temperature varied from 100° to 102° F. during the first 4 days after operation; she did not, however, present serious symptoms till the 5th day, when she became restless, with rapid pulse and breathing. Her condition rather rapidly got worse, and she

22	E. A.	Streatham	46	S.	June 28	Papillomatous tumour of left ovary; ascites; secondary infection of peritoneum, omentum, &c.	Firmly adherent to surrounding parts	Right ovary not made out	No	No	D.	See "Abstract."
23	M. V.	Brixton	23	M.	July 7	Suppurating cyst of the right ovary secondary to salpingitis	Firm old adhesions to surrounding parts	Normal, but adherent	No	No	R.	There was some superficial suppuration at the lower angle of the wound, which delayed healing, otherwise good convalescence.
24	A. D.	Horley, Surrey	64	M.	July 12	Papillomatous cyst of left ovary; ascites	Old adhesions to intestine and to broad ligament	Other ovary was buried amongst adhesions and could not be defined	No; plug of gauze for 24 hours	No	R.	A large abscess formed in the track of the gauze plug, and several ounces of offensive pus escaped on 12th day after operation. The highest temperature reached was 100° F. at night on four or five ocasions. After discharge of the pus she made a good recovery, but presented herself at the hospital in the following December with a second cyst which had grown on the opposite side.
25	A. B.	Stoke Newington	47	M.	July 12	Papillomatous cyst of right ovary	None	Normal, but atrophied	No	No	R.	Uninterrupted recovery. Highest temperature after operation 99·2° F. on 2nd day.
26	M. P.	Market Weighton	31	M.	July 27	Suppurating cyst of left ovary; cyst of right broad ligament	Universal firm adhesions to parts around	Not recognised at operation	48 hours, then rubber tube	No	R.	Patient got up on the 18th day after operation, but the sinus was still discharging when she left the hospital on the 24th August. With this exception she made a good recovery.

No.	Name.	Residence.	Age.	Civil condition.	Date of operation.	Nature, &c., of tumour.	Adhesions.	Condition and treatment of other ovary.	Glass drainage tube.	Peritoneum flushed.	Result.	Remarks.
27	E. B.	Wellingboro'	30	M.	Sept. 6	Cystic adenoma of left ovary; right hydrosalpinx	None	Somewhat enlarged and œdematous	No	No	R.	The cyst had grown between the layers of the left broad ligament, stripping the peritoneum from the whole of the left and posterior pelvic wall. Normal convalescence.
28	J. O.	Stratford	58	W.	Sept. 10	Multilocular cyst of left ovary; cystic degeneration of right ovary	Firm adhesions round right ovary	See "Nature of tumour"	No	No	R.	Uninterrupted recovery.
29	S. S.	Wandsworth	20	S.	Sept. 17	Cystic adenoma of left ovary, weighing 22½ lbs.	None	Normal	No	No	R.	Tumour consisted of an enormous number of small cysts varying in size, and three larger ones at posterior part of tumour. An incision 8 inches long was necessary for its removal.
30	M. B.	Clapham	36	M.	Sept. 20	Papillomatous tumour of both ovaries; ascites; left hydrosalpinx	Firm bands of adhesion to uterus and pelvic wall	See "Nature of tumour"	No	Yes	R.	The tumour consisted of a solid papillomatous growth of both ovaries, without any formation of cysts. Patient made an excellent recovery.
31	E. W.	Clapham	22	S.	Sept. 27	Broad ligament cyst on right side with matting of intestines	There were extensive old adhesions around tumour, probably the result of an attack of tubercular peritonitis at age of 5	Not recognised owing to adhesions	Rubber tube for a week	No	R.	Owing to the firmness of the intestinal adhesions it was found impossible to remove the cyst wall, which was very thin. It was therefore opened and drained. Patient made an excellent recovery.

32	M. A.	Ringwood	38	S.	Oct. 20	Multilocular cyst of right ovary	Firm old adhesions to posterior surfaces of broad ligament and uterus, and to pouch of Douglas	Not recorded	No	No	R.	Patient developed functional paralysis of the left arm after the operation, which gradually improved by means of electrical treatment.
33	P. F.	Walworth	49	M.	Oct. 29	Papillomatous cyst of both ovaries	None	See "Nature of tumour"	No	No	R.	Uninterrupted recovery.
34	C. B.	Clapham	35	M.	Oct. 29	Multilocular cyst of left ovary; small suppurating cyst of right ovary, secondary to chronic salpingitis	Very firm adhesions of deeper portion of cyst and of the smaller cyst to rectum and pelvic wall	See "Nature of tumour"	No	Yes	R.	The temperature varied between 98° and 100·2° F. for the first three days, after which it remained normal. Patient made an excellent recovery.
35	E. S.	Wandsworth Road	35	M.	Nov. 1	Suppurating cyst of right ovary, containing 14 oz. of very offensive pus; chronic salpingitis	Firm vascular adhesions to omentum, intestine, &c.	Apparently normal, but bound down by adhesions	No	Yes	R.	Patient was very much troubled with vomiting during the first three days; after administration of enema this symptom was relieved, and she made a perfect recovery.
36	A. H.	Brixton	29	M.	Nov. 8	Multilocular cyst of left ovary; inflammation and hæmorrhage into the cyst consequent on bruising during parturition	Recent adhesions to anterior abdominal wall, firmer to bowels, uterus, and omentum	Not recognised	No	Yes	R.	See "Abstract."
37	K. W.	S. Kensington	39	S.	Nov. 8	Multilocular cyst of left ovary	None	Slightly enlarged and cystic	No	No	R.	Normal convalescence.

Case 18. *Papillomatous cyst of right ovary in a patient from whom a similar tumour affecting the left ovary had been removed fifteen months previously; abdominal section; recovery* (from notes by W. E. F. Tinley).—M. J. V—, æt. 46, married, laundress, residing at Bournemouth, admitted June 2nd, 1894, discharged July 4th, 1894.

Menstruation commenced at the age of eleven, of the twenty-eight-day type, usually lasting a week. Patient was married at the age of twenty-one, and had two children within the three years following her marriage; no miscarriages. After this she was always regular up till May, 1892, when the periods became irregular prior to the menopause. Patient was always strong and healthy till May, 1892, when she had "a seizure," accompanied by loss of power in the left arm and leg; she remained in bed for several weeks, after which she completely recovered from the paralysis. She was admitted to St. Thomas's Hospital on the first occasion on March 25th, 1893, for enlargement of the abdomen, caused by ascites with a solid tumour of the ovary. Abdominal section was performed on March 28th, and a large multilocular cystic tumour of the left ovary, with papillomatous intra-cystic growths, was removed. Some of the cysts had ruptured, and the intestines were in many parts studded with papillomatous growths. Four and a half pints of ascitic fluid were removed with the tumour. At this time the right ovary was found to be atrophic and adherent to the surrounding structures, and it did not appear necessary to remove it. Patient made a good recovery, and left the hospital in April, 1893. She remained perfectly well till May 17th, 1894, when she noticed a blood-stained discharge, which she thought was the period returning. The discharge, however, continued, though paler in colour, and sometimes clots of blood were passed. With the exception of this discharge there were no other symptoms except that she has noticed that her stomach has been getting a little larger lately, but this did not give her any inconvenience. She was seen by her doctor, who advised her to come into the hospital again.

On admission, patient is a stout, healthy-looking woman, with thick abdominal walls. On deep palpation a tumour

can be felt in the lower part of the abdomen, rising out of the pelvis to the level of 5 inches below the ensiform cartilage. Laterally the edges are less clearly defined, but the breadth of the tumour appears to be from 6 to 6½ inches. There is dulness over the tumour, but no evidence of free fluid in the abdomen, as was present before the previous operation. No fluid thrill can be obtained, but fluctuation is quite distinct. The greatest circumference of the abdomen is 34½ inches. *Per vaginam* the cervix is lying high up and pressed forwards, owing to the presence of the tumour behind it. The sound passes the normal length in front of the tumour, which causes some depression of the posterior fornix. The uterus is fixed. Urine is acid, contains a thick deposit of urates, but no albumen or sugar.

Abdominal section (June 7th, 1894).—Incision 3 inches long in the line of the old scar down to the peritoneum. After opening the latter with a blunt-pointed bistoury, a tense cyst, covered with a number of large vessels, was exposed. A trocar and cannula were thrust into this, and 2½ pints of greenish fluid evacuated. The cannula was removed, and the opening clamped with large curved pressure-forceps, and the cyst was drawn out through the wound. In order to do this some old adhesions had to be separated, which had to be secured with pressure-forceps and ligatured. The cyst being entirely brought out of the abdomen, the pedicle was transfixed and tied in two sections with a double silk ligature. The tumour was now removed and Douglas's pouch cleansed with marine sponges. The wound was now closed in the usual manner, a special buried catgut suture being used to bring together the edges of the aponeurosis covering the rectus muscle. No douche or drainage-tube was used.

The tumour removed was found to be a unilocular cyst of the right ovary. It was smooth on the outer surface, except in parts where it had been adherent. The Fallopian tube measured 7½ inches in length, and was stretched over the cyst. On laying open the cyst the greater part of the inner surface presented a smooth wall, but over an area about the size of the palm of the hand a mass of papillo-

matous growths, looking like the roe of a salmon, projected into the interior of the cyst to the extent of about half an inch. On microscopic examination the villous processes were seen to be covered with proliferating epithelium with central portion consisting of fibrous tissue containing blood-vessels.

June 8th.—Patient was a little sick after the anæsthetic, but has had no retching since. She is quite comfortable and free from any pain or abdominal distension. Temperature 98·6° F., pulse 84.

12th.—Going on very well. There was a little discharge from the wound at its upper end, so the top stitch was removed, as the tension seemed to be too great.

14th.—Sutures removed to-day; the wound had all united by first intention, with the exception of the upper angle, which is granulating up.

22nd.—Patient got up for the first time to-day. She remained perfectly well, and was discharged on July 4th.

Case 22. *Papillomatous tumour of left ovary; abdominal section; portion of tumour removed for microscopic examination; second abdominal section, with removal of tumour; secondary infection of peritoneum and liver; death two months after operation, due to septic infection from necrotic change in portion of growth remaining in pelvis* (from notes by W. E. F. Tinley).—E. A—, æt. 46, single, housemaid, residing at Streatham, admitted June 23rd, died September 8th, 1894.

Catamenia began at age of eleven, of the twenty-eight-day type, usually lasting three days. She has always been regular, but since she was twenty years old has suffered from vomiting at her periods. Two years ago patient lost rather more than usual at her periods, and shortly after this the "change of life" came on. Two months ago she first noticed that her stomach was larger than it had been. She, however, kept to her work, but felt very weak, and had pain round the lower part of the stomach when she stooped to do anything. As she was sick and unable to take her food she saw her doctor on June 14th, who gave her some medicine which relieved the sickness, but advised her to come into the hospital. Patient's appetite has been failing during the

last two months, and her bowels have only been opened after taking medicine. She does not think, however, that she has lost flesh, and lately the abdomen has increased rapidly in size.

On admission, a number of enlarged veins are seen over the front and sides of the abdomen. The latter is very much distended, and the abdominal walls are stretched and slightly œdematous. The bulging is most marked in the lower part of the abdomen and in the flanks. There is dulness in the flanks, the extent of which changes with alteration in the position of the patient, showing the presence of free ascitic fluid. In the middle line the dulness extends to within two inches of the umbilicus. No tumour can be felt in the abdomen owing to the distension with ascitic fluid, but *per vaginam* a fixed nodulated mass of cartilaginous consistence is felt behind the cervix in Douglas's pouch, and on the right side a tense band can be felt passing outwards from the cervix. As the result of the examination, it was decided to make an exploratory laparotomy in order to see whether the tumour could be removed.

June 29th.—Patient being anæsthetised with ether, an incision $2\frac{3}{8}$ inches long was made in the middle line. The peritoneum, which was much thickened, was opened, and $8\frac{1}{2}$ pints of ascitic fluid evacuated. The hand being then inserted, the whole peritoneum, both visceral and parietal, was found studded with papillomatous nodules varying in size from a pea to a small orange. Some of these readily became detached from the omentum, and as the pedicles were very vascular, the omentum with the masses of growth was ligatured in sections and removed. A large mass of growth could be felt in the situation of the left ovary, and to a less extent on the right side, and as in this region the infiltration of the growth made it probable that the disease was malignant, it was decided not to attempt a radical operation, but to remove all the ascitic fluid, and close the abdomen. This was done with five silkworm-gut sutures, a continuous buried suture of catgut being used to bring together the rectal aponeurosis.

29th.—Patient has had a little pain in the abdomen, and feels somewhat distended. There has been no sickness,

however, and the temperature this morning is normal, pulse 96.

30th.—Very little distension of abdomen; has passed flatus naturally, but the urine still has to be drawn off by catheter. Temperature was up to 101·2° at noon yesterday, but to-day is 99·2°.

July 2nd.—Bowels were opened yesterday after an enema. For the past two days patient has been able to pass water naturally. There is still some abdominal distension, but no sickness.

5th.—Stitches removed; wound quite healed.

9th.—Patient is going on well. Temperature normal. A microscopic examination has been made of the portion of growth removed, and the latter is seen to be a typical papillomatous growth, the arborescent protrusions of connective tissue being covered by a single layer of cubical epithelium. This being the case, and there being no evidence of the growth being carcinomatous, Dr. Cullingworth decided to reopen the abdomen and make a further attempt to remove the papillomatous growth of the left ovary.

Operation (July 14th, 1894).—The abdomen was reopened in the line of the previous incision, no adhesions of intestines being present immediately under the wound. A quantity of ascitic fluid escaped, and on introducing the hand the ascitic fluid was found to be roofed in by a number of firmly adherent coils of intestine, which had first to be separated to allow the hand to reach the pelvis. The intestines were found firmly adherent in the pelvis around the mass felt on the left side, and, after separating these, masses of papillomatous growth were removed piece by piece from the left side of the pelvis, leaving a very irregular cavity from which there was a good deal of oozing. The left Fallopian tube was removed with this mass of friable growth. A smaller quantity of growth was then removed in a similar manner from the right side of the pelvis. The uterus was found to be small, and behind it was a large mass of adherent intestines. Hæmorrhage was checked by means of pressure of sponges. The peritoneum was cleansed with sponges, no douche being used.

The wound was then completely closed, a special buried catgut suture being used to unite the edges of the aponeurosis covering the rectus muscle.

16th.—Patient had a good deal of pain on the first two nights following the operation, requiring a hypodermic injection of morphia (5 minims) on each night. An enema was given last night with good result, but the abdomen is still distended and tympanitic. Temperature at 4 p.m. 101·4°, pulse 112.

17th.—Castor oil was given early this morning with fair result, and was followed by a simple enema, which resulted in the passage of a fair amount of flatus.

18th.—Patient had a bad night, and at 2 a.m. became suddenly collapsed, but this condition soon passed off. A small liquid motion followed the administration of an ounce and a half of house medicine. The abdomen is still very distended. Temperature has varied beteen 100° and 101·8° F. during the last forty-eight hours.

19th.—Still a good deal of pain and very little sleep. The distension still continues very great, and drachm doses of sulphate of magnesium were given every hour and then at longer intervals. She passed several liquid stools and some flatus without much relief. Afterwards an enema was given with the long rectal tube, and some flatus was passed.

23rd.—The distension has gradually diminished since the last note. During the last three days the abdomen has been gently massaged, in addition to which castor oil was given on the night of the 20th. There is some superficial suppuration in the wound, which is dressed with chlorinated soda lotion. Temperature is continually above 100°, varying from 100·2° to 102°.

28th.—Distension of abdomen has continued to diminish since last note, but during the last two days patient has suffered from a sore throat, and on examination patches of yellowish-white membrane are seen at the base of the uvula and on the tonsils, apparently of a septic nature. The wound is granulating.

August 4th.—The throat is still sore, but the membrane is less in amount. During the last two days there has been

some diarrhœa. The temperature has been lower during the last four days, varying during the day from 98·6° to 99° in the morning to 99° to 101° at night. The pulse, however, is 120, and weaker than it was.

14th.—The throat is still painful, but has much improved. Patient's general condition is not satisfactory, the evening temperature usually touching 100°.

15th.—Had a rigor this afternoon, temperature rising to 102°, and at 3 p.m. to 103·2°. The respirations were 40 in frequency.

17th.—Rather better this morning. There is dulness on percussion over the left base, extending up to the angle of the scapula, over which area there is weak tubular breathing. There has been no rusty-coloured sputum. Temperature during the day varied between 98·8° at 8 a.m. and 101·6° at midnight.

23rd.—Since the last note patient has been getting gradually weaker and unable to take her food. The wound is still suppurating, and presents an unhealthy appearance. During the last two days the urine has been very offensive, containing mucus and pus, but no blood; it is strongly alkaline, and contains a little albumen.

September 2nd.—The weakness has gradually continued, and patient has lain for the past few days in an apathetic semi-conscious condition. She has had diarrhœa lately, and during the night had incontinence of urine and fæces. The pulse is feeble and intermittent, and patient is greatly emaciated.

Patient gradually got weaker, with continuance of the diarrhœa, and she died on September 8th from gradual exhaustion. During the week preceding her death the temperature on only one occasion reached 100°, viz. on the evening of the 2nd.

Autopsy.—The abdomen being opened in the usual way, the peritoneum was found studded with small papillomata, in addition to which much larger masses of friable growth were found in the upper part of the abdomen, one over the left and the other under the right lobe of the liver; masses of varying size also studded the peritoneum over that viscus, but could all be peeled off. The pelvic viscera and some

coils of small intestine were matted together by recent adhesions, and intermixed with friable sloughing offensive fragments of growth, which were chiefly situate in the walls of the cavity from which the tumour on the left side had been removed. The uterus was normal. The right ovary was found infiltrated with papillomatous growth, the other could not be discovered. The liver was congested, but contained no new growth actually in the substance, the masses described above growing in the peritoneum covered that organ. The heart muscle was pale, and the left ventricle somewhat dilated. There was collapse of the lower lobe of the left lung, but no excess of fluid either in pleuræ or pericardium.

Case 36. *Multilocular cystic adenoma of the left ovary; inflammation in the cyst from bruising of a part of the cyst during parturition; abdominal section; recovery* (from notes by G. Candler).—A. H—, æt. 29, married, residing at Brighton, admitted November 5th, 1894; discharged December 22nd, 1894.

Catamenia began at age of fifteen; loss moderate and free from pain, duration about three or four days. Seven years ago, whilst patient was in service, she suffered for three months with pain in the stomach and vomiting after food, with very troublesome diarrhœa. About this period she used to suffer from a white vaginal discharge when out of sorts. She was married in 1888, and her first two confinements were easy and uncomplicated. Four months before admission, *i. e.* when she was about six months pregnant with her third child, she had an attack of pain with vomiting and diarrhœa. The pain was situated in the lower part of the abdomen, and lasted about two days, but did not recur. Although patient herself did not notice that she was larger than she should be during this pregnancy, her friends observed it. Patient was confined on September 25th, 1894, with her third child; the labour was natural and the child alive, and convalescence was going on quite satisfactorily till the twelfth day after labour, when she was seized with severe cutting pain in the lower part of the abdomen, with retching and diarrhœa. She had no rigor, but suffered from

profuse perspirations. The lochia, which had been quite normal in amount and character, ceased about this time, and the child was weaned. She was treated with turpentine stupes and hot vaginal douches, and the severe pain subsided. The left leg, however, began to swell and became painful about three weeks after delivery, the swelling extending from the foot halfway up the thigh, and the skin being tense, white, and shiny. The bowels, which at first were loose, now became constipated, and had to be opened by means of enemata every day. The patient remained in much the same condition up to the time of her admission.

On admission, patient is extremely thin and anæmic, with a bright flush on both cheeks. She looks ill, but has no anxiety or apathy in her expression. The abdomen is prominent and asymmetrical, the prominence being most marked in the left side of abdomen and left flank. Dilated veins can be seen on this side. The bulging seems to be caused by a tumour springing out of the pelvis, but the outline of such tumour is difficult to define with accuracy, owing to the extreme distension from tympanites. Dulness is well marked over the left side up to the middle line, and to a level of two inches above the umbilicus; over the rest of the abdomen there is a markedly tympanitic note. There is œdema of the left leg. *Per vaginam* the cervix is obliterated, and the external os is felt in front and just behind the upper part of the symphysis. Filling up Douglas's pouch is a swelling which depresses the vaginal roof, and is continuous with the abdominal tumour. Uterine sound passes without difficulty upwards and to the right for 3½ inches. The tumour depresses the bladder in the middle line, so that the sound passes freely upwards on either side of the middle line.

Abdominal section (November 8th, 1894).—Ether being administered by Mr. Tyrrell, an incision four inches long was made through the abdominal wall, which was much stretched and thinned by pressure. The cyst at once presented on opening the peritoneum. It was everywhere adherent anteriorly to the abdominal wall, but the adhesions were recent and easily broken down by the hand introduced into the peritoneal cavity. The incision was prolonged upwards

for an inch, and in the further manipulations the cyst wall burst, and some thick glairy brownish fluid escaped. An attempt was now made to evacuate the tumour by tapping, but owing to the number of secondary cysts, the size of the tumour could not be greatly diminished by this means. The incision was therefore prolonged upwards for another inch, and the cyst wall carefully separated from its intimate adhesions to bowel and omentum. A large number of secondary cysts with translucent gelatinous contents escaped. The adhesions of the lower part of the cyst to uterus and the back of the right broad ligament were now separated. A large outgrowth of the tumour was found embedded in the pelvis, and had, as it were, to be scooped out of the pouch of Douglas, after which the Fallopian tube of the left side was exposed, and the pedicle of the tumour made evident. The latter was transfixed, and tied in two portions, and the tumour cut away. It was now seen that a portion of the cyst wall was left in the upper part of the abdomen, and as it was most closely adherent to bowel, it was thought best not to attempt to separate it. Several portions of inflamed and torn omentum were ligatured and removed. The right broad ligament was normal, but the right ovary could not be recognised. A boracic douche was given. As there were one or two bleeding points in Douglas's pouch, where a portion of the tumour had been adherent, these were picked up with artery forceps and ligatured. Finally the wound was closed with silkworm-gut sutures. Patient suffered a good deal from shock during the operation, at the end of which the pulse was 156 and temperature 96·4°.

The parts removed consist of a large multilocular cyst of the left ovary, inflamed and very friable. The outer surface of the tumour is everywhere roughened from the presence of adhesions, and its wall much thickened. On section the tumour is seen to consist of an enormous number of secondary cysts, varying much in size. In one part of the tumour which lay in the pelvis, and had evidently been bruised during parturition, a considerable amount of hæmorrhage had occurred into the tumour, and some necrotic change was also present. The contents of the cysts were viscid mucoid fluid.

9th.—Patient had a fair night, and was able to pass water naturally this morning. The temperature, which was subnormal for some hours after the operation, was 98·2° at midnight. She is still extremely anæmic, but otherwise is going on satisfactorily.

10th.—There is some pain in the lower part of the abdomen, but no distension. A simple enema was given this morning, which resulted in the passage of flatus, and was returned discoloured.

12th.—Castor oil (one ounce) was given last night with good result.

15th.—Stitches removed; wound quite healed. Temperature normal since operation.

24th.—Temperature rose to 101° yesterday afternoon, and there was some flatulent distension of the abdomen. This was relieved by the passage of flatus, and this morning temperature is normal.

26th.—Got up for the first time to-day.

December 6th.—Has been gaining strength every day, and feels now quite well. Is taking an iron tonic.

18th.—*Per vaginam* uterus is centrally situated, and freely movable. There is a little resistance in the tissues behind the cervix, and slight induration can be felt. The measurements before and after operation are given below.

	Nov. 8th (before operation).	Dec. 22nd (after operation).
Maximum girth	32 inches	26 inches.
Left ant. sup. spine to umbilicus	8 ,,	5½ ,,
Right ditto	7½ ,,	5¼ ,,
Pubes to ensiform	15 ,,	12 ,,
Pubes to umbilicus	7 ,,	5½ ,,

Special Table II.—*Abdominal Section for Diseases of Fallopian Tubes.*

No.	Name.	Residence.	Age.	Civil condition.	Date of operation.	Nature of disease.	Nature of operation.	Glass drainage tube.	Perition. flushed.	Result.	Remarks.
1	A. C.	Edmonton	33	M.	1894 Jan. 13	Gestation in right Fallopian tube; secondary abdominal gestation going on to full term	Living fœtus removed by median incision; portion of sac cut away; cord divided close to placenta, which was left with rest of sac in abdomen	No	No	D.	Patient bore the operation well, and for the first three weeks after the operation made fairly satisfactory progress, though she suffered from occasional pain in abdomen, and the temperature usually reached 100° to 100·5° F. at night. On Feb. 6th she had rigor, with temperature 104·2°; during 7th it varied between 100·2° and 102·6°; and on 8th secondary laparotomy was performed, with removal of placenta and suppurating sac. Patient died 7 hours after operation from shock. See 'Brit. Med. Journ.,' Dec. 22, 1894, and "Abstract."
2	M. W.	Forth Bridge Road	47	W.	Feb. 15	Intraperitoneal abscess, secondary to double pyosalpinx	Abscess opened and drained; part of omentum forming wall of abscess removed; left tube and ovary removed	Yes	Yes	D.	See "Abstract."
3	S. L.	Balham	31	M.	March 1	Left pyosalpinx	Left tube and ovary removed	18 hours	Yes	R.	Some suppuration occurred in the wound on the 6th day after operation; a rubber drainage-tube was inserted, and was kept in till the 30th day after operation. Patient's general condition was very good.

No.	Name.	Residence.	Age.	Civi condi-tion.	Date of operation.	Nature of disease.	Nature of operation.	Glass drainage tube.	Periton. flushed.	Result.	Remarks.
					1894						
4	J. F.	Clapham	31	W.	March 3	Right purulent salpingitis; small cyst of right ovary containing 2 oz. of clear fluid	Right tube removed; cyst in left ovary ruptured during removal	No	No	R.	Uninterrupted recovery.
5	M. C.	Haslemere	32	M.	March 27	Tubal gestation on right side; rupture into peritoneal cavity four days after admission; hæmatoma of left broad ligament	Right Fallopian tube removed; fœtus and nearly 2 pints of blood removed from peritoneal cavity	No	No	R.	Rupture occurred four days after patient's admission; abdominal section was performed 18 hours later, when patient had recovered from the shock of the rupture. The hæmatoma of left broad ligament gradually diminished in size. Patient made an excellent recovery.
6	L. H.	Camberwell	28	M.	May 28	Gestation in left Fallopian tube; rupture with intra-peritoneal hæmorrhage; hæmorrhagic cyst of right ovary	Left tube and ovary removed, the former containing an ovum at 10th week of gestation; 16 oz. of blood removed from peritoneal cavity; right ovary removed	No	No	R.	Patient made an uninterrupted recovery. First catamenia after operation began on 27th November.
7	E. S.	Kensington	25	M.	July 13	Chronic salpingitis; broad ligament cyst on left side	Left ovary and Fallopian tube removed; broad ligament cyst ruptured during removal	No	No	R.	During the operation a retro-peritoneal cyst about the size of a kidney was found lying in front of the last lumbar vertebra; it was punctured, and its clear serous contents evacuated. Patient made an excellent recovery.

8	M. C.	Blackheath	31	S.	July 26	Gestation in right Fallopian tube; rupture with intra-peritoneal hæmorrhage	Removal of fœtus and gestation sac containing placenta formed by expanded Fallopian tube	Iodoform gauze for 24 hours, then rubber tube for 24 hours	No	R.	The fœtus removed measured 8¼ inches. The expanded tube was quite free from adhesions, but the umbilical cord, which measured 11 inches, was adherent in a tortuous manner to intestine. Convalescence was quite normal.
9	S. S.	Marylebone	39	M.	Oct. 12	Gestation in right Fallopian tube, associated with chronic salpingitis of both sides; pelvic hæmatocele	Both tubes and ovaries removed	No	No	R.	See "Abstract."
10	C. S.	Rotherhithe	33	M.	Oct. 25	Right pyosalpinx; chronic salpingitis on left side with suppurating cyst of left ovary	Both tubes and ovaries removed	No	No	R.	The symptoms in this case had extended over ten years, and the adhesions to the surrounding parts were found extremely firm and difficult to separate. Temperature after operation only once reached 100° F., viz. on the 11th day, and patient made an excellent recovery.
11	A. D.	Chessington	24	M.	Nov. 1	Tubercular salpingitis affecting both sides; suppurating cyst of right ovary; collapsed cyst measures 3½ inches in diameter	Both Fallopian tubes removed with suppurating cyst; left ovary not removed	No	Yes	R.	Patient suffered very much from shock after the operation, which was extremely severe, owing to the dense adhesions to intestines, omentum, &c. Temperature varied between 98·4° F. and 101° or 102° F. for the first fortnight after operation, after which it remained normal. She was discharged on the 28th Nov., and a month later had greatly improved in health and was quite free from pain.

No.	Name.	Residence.	Age.	Civil condition.	Date of operation.	Nature of disease.	Nature of operation.	Glass drainage tube.	Periton. flushed.	Result.	Remarks.
					1894						
12	A. T.	Woolwich	39	M.	Nov. 2	Hydrosalpinx of left side; chronic peritonitis	Left tube and ovary removed; hydrosalpinx contained 5½ oz. of clear serous fluid	No	No	D.	Patient was greatly troubled with pain and flatulence after operation for the first 5 days, and was sick after pills and castor oil. On Nov. 7th good result followed olive oil enema given with the long tube. She got up on Nov. 18th, and kept quite well till the 25th, when she was suddenly seized with severe pain in abdomen and collapse, and died 14 hours later. At the autopsy the lower four feet of small intestine were found distended and gangrenous from kinking due to adhesions.
13	S. S.	Wimbledon	36	M.	Dec. 1	Gestation in right Fallopian tube; tubal abortion with intra-peritoneal hæmorrhage	Ovum removed with 28 oz. of blood; right tube and ovary removed	No	No	D.	Patient was admitted in a state of extreme collapse on 30th Nov. She had improved slightly on the next day. Infusion of saline solution was had recourse to during the operation, which only lasted 20 minutes, and patient rallied for a few hours. In the evening she got rapidly worse, and breathing was much embarrassed by mucus in the air passages, and she died 10 hours after the operation. See 'Obst. Soc. Trans.,' vol. xxxvii.

Case 1. *Extra-uterine gestation; rupture with secondary abdominal gestation going on to full term; abdominal section with removal of living fœtus; placenta and sac left within the abdomen; suppuration in sac; secondary abdominal section with removal of placenta and a portion of the sac; death from shock; autopsy* (from notes by W. H. Allen).—A. C—, æt. 33, married, residing at Upper Edmonton, admitted 13th January, 1894; died 8th February, 1894. Catamenia began at age of eleven, twenty-eight-day type, duration four or five days. Has had one child thirteen years ago, and a miscarriage three years ago. After the latter she had been quite regular in her periods till March or April, 1893, when the amenorrhœa of the present pregnancy began. In May, 1893, she had an attack of pain in the abdomen, which she attributed to a chill, and about the same time she noticed a slight discharge of blood from the vagina. The breasts were at this time a little full, and the areolæ pigmented. In the middle of August she was seized with very severe pains in the right side of the abdomen, and had to remain in bed for a short time. She again had a sudden attack of bearing-down pains, with a good deal of blood-stained discharge, about the 20th September. The pains soon passed off, but the discharge continued, and she was admitted to St. Thomas's Hospital on 25th September. She was sent up to the hospital by Dr. Green as a probable case of extra-uterine gestation. On examination, a swelling could be felt reaching upwards out of the pelvis to an inch above the umbilicus, with its most prominent part a little below and to the left of that depression. It was smooth above and to the left, but below the outline was not so well defined; on the right it was continuous with a resistant mass in the right iliac region. Fœtal movements could be felt very easily, and it was noticed that very little tissue intervened between the fœtus and the examining hand. The tumour was dull on percussion. *Per vaginam* the cervix was found not to be soft. There was distinct movement of the cervix on exerting pressure on the most prominent part of the abdominal tumour. While the patient remained in the hospital, the fœtal heart sounds and movements were frequently made out,

the temperature was normal, and the pain and discharge for which she was admitted gradually ceased. She improved very much in her general condition, and was discharged on the 18th October, and from the examinations of the case in the hospital it was thought that the pregnancy was intra-uterine. From the time patient left the hospital up till 5th January, 1894, she remained quite well, except that she got rather thinner. This, however, was accounted for by her not getting sufficient food, her husband being only a street hawker. In the early hours of the morning on 5th January she was seized with acute pain in the abdomen and vomiting; the pains were paroxysmal, and reminded patient of labour pains. The intervals between the pains at first were of long duration, but gradually became shorter, and just before her admission on the 13th the pains were almost continuous. The situation of the pain was across the upper part of the abdomen and lower part of the chest, and patient herself was conscious that they were ineffectual. The vomiting persisted the whole time, and she got rapidly weaker and thinner during the eight days between the onset of this attack and her admission. Dr. Green was sent for about noon on the 13th January, and found the patient in pain, and apparently in labour. *Per vaginam* he felt a distinct length of cervix, but the cervical canal would not admit the finger. He decided to wait an hour or two, and then to dilate the cervix to decide whether or not the case was one of ectopic gestation. At 2.30 p.m. he was able to introduce the finger into the cervix, and found the uterus empty, the cavity three inches long, lying behind and to the left. The diagnosis being thus made certain, the patient was removed to the hospital at 8.15 p.m.

On admission, patient is an emaciated, careworn-looking woman, evidently suffering severe pain and much exhausted. The cheeks are sunken, and the muscles of the limbs are soft and flabby. Heart and lungs are normal. The abdomen is nearly uniformly distended, except for a prominence above and slightly behind the left anterior superior iliac spine. A large tumour can be felt extending for three inches above

the umbilicus. The parts of the fœtus are easily made out, the fœtus lying somewhat transversely. The prominence mentioned above is made out to be the head of the child. The fœtal heart can be heard, and fœtal movements are readily detected. No fluctuation or fluid thrill can anywhere be detected. *Per vaginam* the cervix is high up, and looks almost exactly downwards. There is no obliteration of the anterior or posterior fornix. The cervix is soft, the os being patulous and readily admitting the finger up to the internal os; the latter, however, is rigid, but on firm pressure the finger can be passed up to the fundus with difficulty. The interior of the uterus is soft and irregular on the surface, and the sound passes three inches. On bimanual examination a soft fairly fixed mass can be felt lying behind and reaching about two inches above the symphysis pubis. There is a thick blood-stained vaginal discharge. Temperature on admission 97·1°; pulse 130.

As the case seemed likely to require immediate operation, Dr. Cullingworth was sent for, and decided to perform abdominal section at once.

Abdominal section (January 13th, 10.15 p.m.).—A median incision was first made from 1 inch above umbilicus to 2 inches below. It was then extended to 4¼ inches. The abdominal cavity was then explored with the fingers, and the fœtus found lying in the position previously ascertained by examination. There was no sac over the fœtus apart from the fœtal membranes, which were quite free from adhesions. The mass felt above the pubes proved to be the placenta. The fœtal membranes were now incised, and the liquor amnii, which was very scanty (not more than an ounce or two), allowed to escape. The hand being then introduced, the head of the fœtus was found, and after slightly enlarging the incision, the child was removed. The cord was clamped in two places and divided between, the child crying lustily very soon after its removal. Only in two places, one on each side of the abdomen, was there any sign of a sac outside the fœtal membranes. The membranes were now drawn out of the abdomen, and the greater part of them was cut away with scissors,

the cut edge being secured round the wound with artery forceps. It was now found that the lower part of the tumour was adherent both behind and at the sides, and that the larger portion of the placenta was situated posteriorly and to the right. As it was not thought advisable to interfere further with the placenta or membranes, the cord was ligatured close down to its insertion, and the amniotic cavity was sponged dry with marine sponges. The placenta through an oversight was not emptied of blood. The rent in the membranes was now stitched up with eight chromicised catgut sutures, and the abdominal wound closed with nine deep and four superficial sutures of silkworm gut. No douche or drainage was used, the amount of hæmorrhage during the operation being very small. Patient suffered little or no shock from the operation, which lasted fifty minutes. The child measured 19 inches in length, and weighed 5 lbs. The pregnancy had apparently advanced to the end of the eighth month.

14th.—Patient passed a fairly good night after the operation. There is a little distension of the abdomen this morning, which diminished after the passage of flatus. The urine is high-coloured, acid, sp. gr. 1020, and contains some albumen and a little mucus. The child has passed urine and fæces freely since its birth.

15th.—Yesterday afternoon patient vomited twice, but this has not occurred since. Highest temperature since operation 98·4°. Patient is taking barley-water and soda and milk. The dressing was changed to-day, and the wound appeared quite healthy. Child is doing well.

17th.—Simple enema was given last night with good result. Patient looks brighter, and feels very well. There has been very little vaginal discharge since the operation. She is now taking fish diet. Urine contains about one twentieth albumen.

18th.—Patient has pain at times in the abdomen, but it is usually relieved by the passage of flatus. The temperature to-day is 98·8° F., but on the last two nights it has reached 100·2° and 100·4° respectively.

19th.—The abdomen is slightly distended. Bowels were

well opened this morning after castor oil. The vaginal discharge has ceased.

22nd.—In the middle line of the abdomen there is dulness on percussion for 4½ inches above the pubes, extending also outwards towards the right iliac fossa, and for 3 inches to the left of the middle line. This area of dulness is over the situation of the placenta, which can easily be made out. The temperature since the last note has been persistently higher, reaching 101·6°, 102·2°, and 102° respectively at 8 p.m. on the last three nights. During the last few days a very large quantity of urine has been passed, varying from 70 to 90 ounces per diem; it contains no albumen now.

24th.—During the last two days the temperature is lower, only reaching 100° at night. The tumour formed by the placenta has its upper margin at a level of 5 inches above the pubes on the left side and 7½ inches on the right side. The stitches were removed to-day.

27th.—Patient is making very satisfactory progress. She occasionally has pain on micturition. Child has gained ½ lb. in weight.

31st.—Had a good deal of abdominal pain yesterday morning, which was relieved after administration of an enema. There is very little tenderness in the abdomen, which is, however, slightly distended. Temperature has reached 100·8° on the last two nights.

February 3rd.—The temperature during the last two days has been rather higher, and during the same period patient has had some blood-stained vaginal discharge. The upper margin of the placenta is 6⅞ inches above the pubes on the right side and 5½ inches on the left side.

5th.—An enema was given this morning with a long tube, which was followed by the passage of two motions. Shortly after this patient had a shivering fit, which lasted ten minutes, but was unattended by any rise of temperature. The vaginal discharge continues. The distension of the abdomen remains as before, and there is some evidence of a small amount of fluid in the abdomen. The patient complains of no pain, and is free from any tenderness.

7th.—Yesterday patient was very sick during the after-

noon and evening. The temperature, which was 101·2° at noon, rose to 103·4° at 4 p.m. and 104·2° at 8 p.m. It gradually fell during the night, and this morning is 100·2°. She slept well during the night, and this morning is very drowsy and is sweating profusely. She complains of pain across the lower part of her abdomen, which she says resembles the pain she has at her periods. The vaginal discharge continues.

8th.—Patient was sick again last night after castor oil, and had a restless night. She is unable to take much in the way of food, owing to the feeling of nausea. During the past twenty-four hours the temperature has been lower on the whole, but her general condition has not shown any sign of improvement, and she is still drowsy. As it seemed evident that the placenta and sac left behind in the abdomen were the cause of the patient's symptoms, it was decided to reopen the abdomen, and endeavour to remove them.

Operation (2 p.m.).—Median incision 3 inches long through the lower part of the old wound. The smooth surface of the upper part of the placenta presented, and was free from any adhesion to the abdominal wall. It was adherent above to the omentum and below to the anterior wall of the pelvis. The amniotic cavity was roofed by small intestine. In breaking down these adhesions a considerable quantity of blood and pus escaped. The adhesions round the upper part of the placenta were first separated, and finally the adhesions of the placenta in the pelvis were separated, and the placenta brought out through the wound. It was still attached by a long pedicle, which on examination proved to be the right broad ligament. Very little hæmorrhage occurred during this separation. A bladder sound having been passed to ascertain the position of that organ, the broad ligament was transfixed and tied in two portions with a strong silk ligature. The placenta was then cut away with scissors. Several vessels in the stump were secured with ligatures, but there was some oozing for some time from the front of the uterus, which was nearly stopped by a hot boracic douche. A small portion of omentum which had been adherent was ligatured and removed, and finally the wound was closed with ten deep silkworm-gut sutures, a glass

drainage-tube being passed down into Douglas's pouch. During the operation the pulse several times became very feeble and the respirations shallow, but at the end the patient seemed to have borne the operation fairly well.

Parts removed.—The placenta consisted of two main lobes, with a third smaller one. The cord was inserted in a velamentous manner at the junction of the two large lobes. The total weight of placenta is 1 lb. 11 oz. The larger lobe is covered by amnion on the fœtal surfaces; its outer surface is also smooth, and covered apparently by a reflection of peritoneum. On section of this lobe, the cut surface presents in parts a normal honeycombed appearance of reddish colour, and in other parts it is yellowish white in colour and of firmer consistence. The smaller lobe is covered on one surface by amnion, which is dull and opaque, and on the other presents a rough surface, where it has been adherent to surrounding parts. There is no evidence of any suppuration in the substance of the placenta. The portion of sac removed with the placenta has its outer surface covered by peritoneum, continuous with that over the placenta. It measures $5\frac{1}{2} \times 3\frac{3}{4}$ inches. The stump of the umbilical cord attached to the placenta is 3 inches long, swollen and of a purple colour, and emits a faint unpleasant odour. On laying open the umbilical vein it is found to contain soft breaking-down blood-clot, slightly purulent, and on tracing the tributaries from the surface of the placenta they are found to contain similar breaking-down clot, which is more purulent in the smaller and more distal branches. There was no sign of necrotic change in the umbilical cord.

Patient did not rally very well after the operation, and at 5.30 p.m. showed very considerable collapse, which came on rather suddenly. Four pints of saline solution were infused into the median cephalic vein, which caused a decided improvement in the pulse and breathing. At 8 p.m. the temperature was 99·6° and the pulse 156. Two and a half ounces of urine were drawn off by catheter, and a hypodermic injection of strychnine was given. Just before 11 p.m., however, she again became suddenly very collapsed, and in spite of treatment rapidly became worse, and died shortly after 11 p.m. on the night of the operation.

Autopsy (sixteen hours after death).—On opening the abdomen the omentum was found properly disposed over the small intestine. There was no actual peritonitis in any part of the abdomen, though there was evidence of past adhesive peritonitis around the left ovary. The parts contained in the pelvis were roofed in by a thin layer of soft recent blood-clot, and some similar clot lay in the pockets behind and to the left of the uterus. The uterus lay in its normal situation, with a raw surface on the right side of the fundus, which had the appearance of having been the source of the hæmorrhage by oozing from the surface. A similar rough area was seen on the upper part of the bladder. The ligature round the broad ligament on the right side was seen to be quite secure. The uterus had an internal measurement of 3½ inches, the length of the body being 2 inches. Internally the surface is hyperæmic, and near the origin of the left Fallopian tube is a small adherent nodule of decidual tissue. The right Fallopian tube embraced by the ligature cannot with certainty be traced into the gestation sac; the left showed no disease beyond the fact that its distal extremity was dilated into a small closed sac containing clear fluid. The right ureter at its upper part was moderately dilated, the left was double in the upper two thirds of its course. Liver, spleen, and kidneys healthy. There was a little post-mortem clot in the right ventricle and trunk of the pulmonary artery, but no suspicion of any pulmonary thrombosis or embolism. In the left ventricle, however, there was some ante-mortem clotting, which was not to be taken as evidence of the cause of death, but merely that death had occurred with a slowly failing heart.

Case 2. *Double pyosalpinx with large loculated intraperitoneal abscess; abdominal section; death from shock; autopsy* (from notes by R. Fox Symons).—M. E. W—, æt. 47, widow, residing at Forth Bridge Road, admitted February 12th, 1894; died February 15th, 1894.

Catamenia began at age of thirteen, always regular, twenty-eight-day type. She was married for the first time in 1870, but has never had any children. Two or three years after her marriage patient had a discharge from the

vagina like matter, for which she consulted a doctor, who applied local treatment for a long time. In November, 1885, she was attended for an attack of "pelvic inflammation." A swelling gradually formed, and she was seen by Mr. Knowsley Thornton in December, who diagnosed a "suppurating ovarian cyst," but did not advise immediate operative treatment, as the patient was too ill and worried owing to recent troubles. The patient gradually gained strength, and by February, 1886, was practically well, the tumour having apparently disappeared. She saw Mr. Thornton again, who told her that an operation now would not be necessary. Patient's husband died suddenly from aneurysm in 1886, and she married again in 1889, but for the past four years has lived apart from her husband. She remained in good health from her illness in 1886 up till November, 1893, when she was seized with severe pain in the lower part of her abdomen. Dr. Scott Battams, who was called in, regarded the case as one of pelvic peritonitis due to inflamed uterine appendages. Dr. Cullingworth saw the case in consultation with Dr. Scott Battams and Dr. Ward on December 18th, 1893, and made the following note:— "Patient has the appearance of a woman of fifty-five. There is a swelling in the lower part of the abdomen with fairly well-defined upper limit halfway between the umbilicus and the pubes. This swelling causes no prominence of the abdominal wall. It is dull on percussion and very tender. *Per vaginam* a hard, tender, irregular mass is felt in both posterior quarters of the pelvis and in Douglas's pouch." The diagnosis made was old gonorrhœal salpingitis. She remained in much the same condition for about three weeks, some days being a little better and able to get up, and others not quite so well. For the last three weeks, however, she has been much worse; and in a letter from her doctor on February 2nd, 1894, she appears to have had a fresh attack of peritonitis, with enlargement of the lower part of the abdomen, which is now rigid, tender, and immovable. She was then much wasted and exhausted, and had daily attacks of vomiting and diarrhœa.

On admission, patient is very anæmic and emaciated, with an anxious expression, and looks extremely ill. The

heart and lungs are normal. The abdomen is distended, especially on the left side, where a swelling can be felt, reaching as high as one inch above the umbilicus. There is dulness on the left side from Poupart's ligament upwards as far as one inch above umbilicus, and on the right side it extends up to a line drawn from the umbilicus to the right anterior superior iliac spine. The mass is very tender on palpation, and a fluid thrill can be obtained over the swelling. *Per vaginam* the uterus is lying anteriorly to the right, and the fundus can be felt lying midway between the umbilicus and Poupart's ligament. There is no depression of the vaginal fornix on either side. The external os is drawn up above the level of the top of the symphysis pubis. In Douglas's pouch there is a swelling, which is hard, irregular, and nodulated, but does not seem to be in direct connection with the abdominal swelling. The urine is acid, contains urates but no albumen.

14th.—Patient is decidedly better since her admission. She has only been slightly sick on one occasion, and is able to take a fair amount of food. The diarrhœa is also less troublesome. The temperature, which was 100° F. last night, is normal this morning.

15th.—The diarrhœa has been more severe since yesterday, six motions having been passed since yesterday afternoon. She feels very low and exhausted, but does not complain of much pain.

Abdominal section (2 p.m.).—Patient being anæsthetised with ether, an incision 4 inches long was made in the middle line below the umbilicus. When the peritoneal cavity was opened, a quantity of very unhealthy-looking omentum presented in the wound. This was pushed aside and the tumour in the abdomen explored with the fingers. There were no adhesions around the swelling on the right side, but on the left side the adhesions to the abdominal wall were extremely firm, and in places had to be divided with scissors. During the separation of these, a quantity (about 25 ounces) of very offensive pus welled up through the wound, and was found to escape from an irregular ragged-walled abscess which extended upwards for 3 inches to the left of the umbilicus. The walls and floor of this

abscess were shut off from the general peritoneal cavity by adherent omentum. The incision was now extended downwards, and more adhesions low down in the pelvis were broken down. In doing this, a good deal more pus seemed to well up out of Douglas's pouch, and as it had a distinctly fæcal odour, a finger of an assistant was passed into the rectum, in order to determine whether there was any communication with the bowel, but none existed. More adhesions were broken down, so as to open up this deeper abscess cavity and ensure drainage, and the abdominal cavity was then douched with hot boracic lotion. A large piece of ragged and inflamed omentum was ligatured and removed. The intestines had been protected during the operation as much as possible by marine sponges. A glass drainage-tube was now passed into the pouch of Douglas, but as there seemed to be some hæmorrhage, it had to be removed, and a large vein secured with a ligature. As there was still a good deal of general oozing, in addition to the glass drainage-tube, the wound was packed with strips of iodoform gauze. The patient at this stage of the operation was considerably collapsed, and thirty minims of brandy were administered hypodermically. The wound was closed with six deep and one superficial suture of silkworm gut, and dressing of wood-wool pads applied. After the operation patient remained extremely collapsed, and the legs had to be elevated in order to revive her. She was removed to the small ward, but died three hours after the operation, without completely regaining consciousness.

Autopsy.—On opening the abdomen there is no general peritonitis, but over the upper surface of the liver and spleen were some soft recent adhesions. In the left iliac fossa was a pocket, about 4 inches in vertical measurement by 2 inches transversely, which had evidently contained pus; its floor was formed mainly by the sigmoid flexure, its roof by omentum, and its right wall also by omentum. In the direction of the pelvis it was closed by a soft black mass the size of a walnut, which proved to be the end of the left Fallopian tube. The latter at its origin from the uterus had the size of an average little finger, which was maintained up to the enlarged ending above described. The

tube ran at first outwards from the uterus, and then inwards and slightly downwards behind the uterus, being folded on itself. At its uterine end the lumen was hardly dilated at all, but the outer end was dilated into a sac with a diameter of three eighths of an inch, which was lined with soft black ragged tissue. The fimbriated end of the tube appeared to be closed, but a rounded opening was present in the wall of the tube close to the extremity, a quarter of an inch in diameter, which communicated with the cavity of the abscess above described. The right Fallopian tube ran much the same course, but on gaining the posterior surface of the uterus it ran vertically downwards, having in this part an internal diameter of half an inch. On reaching a point about one inch down the back of the uterus it began rapidly to enlarge, and soon opened out into a large abscess cavity, in which it was lost. This cavity extended right across the pelvis, flattening the rectum against the sacrum, and driving the uterus against the symphysis. It was undoubtedly an intraperitoneal abscess, but the nature of its floor was very difficult to determine. This floor was a rounded mass of coarsely trabeculated fibrous tissue, having a maximum thickness of $1\frac{1}{4}$ inches; in it were numerous thrombosed vessels, and notably a large vein running through it. This rounded mass, externally the size of half an orange, lay in Douglas's pouch, and its substance fused insensibly with the wall of the right Fallopian tube, but showed no sign of ovarian tissue on macroscopic or microscopic examination. Neither ovary could be found. The uterus was of normal size, but two or three small fibroids were present in or projecting from its walls. In the pouch of Douglas, at its lowest part, lay a collection of clear yellowish fluid with yellow flakes, perhaps three ounces in all. Bladder and ureters were normal. There was no communication anywhere between the abscess cavity and the bowel. The vermiform appendix ran down into the pelvis, and its tip lay in the grasp of the right Fallopian tube. The lungs were emphysematous. Two branches of the pulmonary artery in the base of the left lower lobe were filled with partly decolourised adherent clot of thrombotic origin.

There was no evidence of embolism of the pulmonary artery. The heart showed no change beyond a little atheroma of the aortic flaps. Liver pale, soft, and fatty. Spleen and kidneys normal.

Case 9. *Extra-uterine gestation associated with chronic interstitial salpingitis; rupture with formation of pelvic hæmatocele; abdominal section; recovery* (from notes by F. G. Layton).—S. S—, æt. 39, married, residing at Marylebone, admitted September 27th, 1894; discharged November 21st, 1894. Patient has always been delicate, having suffered from rheumatism when young, since when she has always been short of breath. Four years ago she attended the Brompton Hospital for cough and shortness of breath, but has not had any definite symptoms of tubercular disease. She has occasional attacks of asthma, and has a cough during the winter months.

Catamenia began at the age of twelve; she was regular, flow lasting three to four days, and recurring every twenty-eight days. Married at eighteen; eight children, no miscarriages. The last child was born a year and a half ago, and nine years had elapsed since the previous child was born. Five years ago she was treated at Soho Hospital for displacement of the womb; she wore a pessary for a year, and then it came out. She suffered from "blood-poisoning" after her last confinement, and was in bed for six weeks.

The present illness began on August 29th, when she was about fourteen days beyond the proper time for her period, While out boating at Yarmouth she was suddenly seized with violent pain in the lower part of her abdomen, accompanied by faintness. She was put ashore and had brandy given to her. The pain was partly relieved, but returned with great severity at night, and she felt "as if her inside wanted to come away from her." She also had great difficulty in passing her water. The following day she was better and went out, but could not walk well, as she still felt faint. On September 1st she returned to London by boat, suffering great pain in the abdomen during the voyage, which was partially relieved by application of turpentine. When she reached home she went to bed and applied poultices, partly

to relieve the pain and partly on account of swelling of the abdomen, which she had noticed on her journey home. She sent for a doctor on September 3rd, who advised rest in bed. She had more pain the next day, and on the 5th the doctor made a vaginal examination and found "inflammation and congestion of the womb." He kept her in bed for a fortnight, but she did not improve, and the blood-stained vaginal discharge, which began on the 30th August, continued during the whole period of her illness. He advised her to go to the Samaritan Hospital, and as the in-patient department was closed, she was sent on by Dr. Tate to St. Thomas's Hospital and admitted the same day.

On admission, patient is a healthy and well-nourished woman. There is very great tenderness over the abdomen in the hypogastric and iliac regions, so that palpation is difficult. At an examination under ether on the 28th September, the uterus was found pushed forwards by a swelling behind it which depressed the vaginal roof. This swelling was smooth and globular, soft in some parts and more resistent in others. The distance from the pubes to the summit of the tumour in the middle line is $4\frac{1}{2}$ inches. The fundus of the uterus can be felt on the left side at a height of 3 inches above the pubes. On the right side the tumour extends for $3\frac{1}{2}$ inches above the pubes. The sound passed for $2\frac{3}{4}$ inches.

October 1st.—The temperature rose to 103·4° after the examination, and was 102° on the following morning. It then gradually fell, and this morning is 99·4°. The pain and tenderness in the abdomen have been relieved by hot fomentations.

4th.—During the past few days patient has had a good deal of abdominal pain, paroxysmal in character. The temperature has varied between 99° and 101·4°. There had been a good deal of bronchitis, and rhonchi are present over both lungs.

6th.—Patient is much better this morning. The cough has almost disappeared, and the respirations are normal. The abdominal pain is much better.

10th.—The pain across the lower part of the abdomen is more severe. Nothing abnormal is heard in the chest

except an occasional click at the right base posteriorly. Temperature since last note has been much lower, reaching 100° to 100·6° in the evening. The abdominal tumour shows no evidence of diminution in size.

Abdominal section (October 12th).—An incision 4 inches long was made in the middle line, the fat in the abdominal wall being 1½ inches thick. On introducing the hand into the abdomen, a quantity of dark-coloured blood, partly clotted, escaped. A piece of thickened and matted omentum, which was very adherent over the mass in the pelvis, was then separated with difficulty. The left Fallopian tube and ovary, which were lying over the surface of the swelling found in the pelvis, was now dealt with. The Fallopian tube was enlarged, and very firmly adherent to the surrounding parts, from which it was carefully separated. The left broad ligament was transfixed, and ligatured in two portions with silk, and the tube and ovary on this side removed. On passing the hand down into the pelvis, it entered an irregular cavity, the walls of which were collapsed, and gave the impression that it might be a ruptured ovarian cyst. The wall of this cavity was found to be very adherent to the back of the uterus and to the floor of the pelvis. After considerable difficulty, the dense adhesions were separated and the mass was brought up to the surface, and it was seen to be connected with the right Fallopian tube and formed part of the gestation sac. The wall of this sac was very friable, and during its removal a good deal more dark-coloured blood and clot escaped. The appendages on the right side having been entirely freed, the broad ligament was transfixed with a pedicle needle and ligatured with a stout silk ligature, and the parts removed. The rest of the blood-clot was now got away with marine sponges. At this stage of the operation the patient suffered rather severely from shock, the pulse being very rapid and feeble. The wound was closed with silkworm-gut sutures, and the usual dressing of wood-wool pads applied.

Parts removed.—The left Fallopian tube is greatly thickened, being 1⅛ inches in diameter, and very tortuous. The outer surface is rough and covered with firm organised adhesions. The uterine end of the tube is patent, and some turbid

fluid exudes on pressure: the fimbriated end is closed. On laying open the tube, which is 5 inches long, its lumen is tortuous, and bridles of tissue project into it at the angles of torsion. The cavity is dilated to the size of the fore-finger; its mucous membrane is inflamed and œdematous, and its wall varies in thickness from one eighth to one third of an inch. The ovary is enlarged, and contains one or two small cysts. The right Fallopian tube is greatly elongated, and its inner half presents a similar appearance to that on the left side, *i. e.* its cavity is dilated, its wall is one eighth to a quarter of an inch in thickness, and its mucous membrane is inflamed and œdematous. The outer half of the tube, however, suddenly expands into a gestation sac about the size of an orange, communicating with the inner half of the tube by an opening which admits the tip of the finger. This sac is much torn, its wall is about one eighth of an inch thick, and its outer surface roughened owing to the separation of adhesions. The inner surface is covered by an adherent layer of altered blood-clot. The fimbriated end of the tube is not easy to determine with certainty, but appears to be at one part of the gestation sac, in which case the latter is a part of the distended tube, and not an adventitious structure. The right ovary is normal. On microscopic examination of the wall of the tube and blood-clot, chorionic villi were not discovered.

13th.—Patient soon recovered from the shock of the operation, and this morning seems to be making good progress. She has had no sickness, and there is no distension of the abdomen. Temp. 102·2°, pulse 118.

15th.—Dressings were changed this morning, wound was looking quite healthy. A simple enema was given this morning with good result. The pulse has improved.

18th.—Patient feels much better. There is no distension. The highest temperature during the last twenty-four hours was 99·6°.

20th.—The stitches were removed this morning; there was some redness round the stitch-holes, but the wound has healed quite well. The temperature rose to 101·6° last night.

24th.—During the past few days patient has had a slight attack of bronchitis, scattered rhonchi being present over

both sides of the chest. The temperature rose to 103° at the onset on the 20th, but rapidly fell, and during yesterday and to-day has been normal.

29th.—Has been getting up since the 27th, though she has occasional pain in the abdomen.

November 2nd.—Patient still has a good deal of abdominal pain. On vaginal examination the uterus is found fixed, and round the fundus is a mass of adherent tissue, consisting mainly of adherent intestines. The uterus is slightly retroverted and directed towards the left.

6th.—Patient is now quite comfortable. Temperature has been normal since the last note.

20th.—Patient is quite well, with the exception of slight pain in the abdomen. On vaginal examination there is some resistance in the right side of the pelvis, and a little tenderness in this region.

21st.—Discharged home.

SPECIAL TABLE III.—*Abdominal Section for Conditions other than Diseases of Ovary and Fallopian Tube.*

No.	Name.	Residence.	Age.	Civil condition.	Date of operation.	Nature of disease.	Nature of operation.	Glass drainage tube.	Periton. flushed.	Result.	Remarks.
1	M. L.	Windsor	43	M.	1894 Jan. 18	Fibroid tumour of uterus causing severe pain and menorrhagia	Exploratory laparotomy	No	No	R.	Patient had been in the hospital in July, 1892, when an exploratory laparotomy was performed. A subperitoneal cyst was punctured, but removal of the appendages had to be abandoned owing to the firm adhesions. Owing to the severe pain patient was suffering, it was decided to make a second attempt to relieve the symptoms by operation, but it was found impossible to remove the appendages or the tumour.
2	M. C.	Bermondsey	32	M.	Jan. 18	Fibroid tumour of uterus causing pain and frequency of micturition	Hysterectomy, with removal of the appendages on both sides (weight of tumour 3 lbs. 11 oz.)	18 hours	No	R.	The stump was treated by the intra-peritoneal method. During the first 3 days after operation vomiting was a very troublesome symptom with great thirst. Temperature varied between 99° and 100·4° F. On the 4th day the bowels were opened by a simple enema, but as the vomiting continued no more food was given by the mouth, and rectal feeding was employed for 3 days, when the sickness stopped. Patient then made an excellent recovery. See "Abstract."
3	M. C.	Lavender Hill	43	M.	Feb. 23	Fibroid tumour of uterus causing menorrhagia, and rapid increase in size	Hysterectomy, with removal of appendages on both sides (weight of tumour 13 lbs. 5 oz.)	18 hours	No	R.	The stump was treated by the intra-peritoneal method. Patient suffered very little shock after the operation, and made an excellent recovery.
4	M. B.	Hankham, near Hastings	47	M.	March 12	Fibroid tumour of uterus causing severe pain and menorrhagia	Hysterectomy, with removal of appendages on both sides (weight of tumour 3 lbs.)	Yes	No	D.	The tumour was found to be adherent to the posterior pelvic wall by very dense adhesions, during the separation of which the hæmorrhage was very severe. Great difficulty was experienced in controlling the hæmorrhage, and patient suffered greatly from shock. She died

						abscess associated with salpingitis and purulent inflammation of vermiform appendix	Fallopian tube and broad ligament, and part of omentum which formed the wall of abscess cavity removed, together with vermiform appendix				Patient was admitted to the hospital 35 days after confinement with temperature 101°. During the first fortnight after her admission the temperature varied between 100° and 103·6°, and convalescence after operation was delayed owing to some suppuration occurring in the wound. A drainage-tube was put in on the 10th day, after which patient steadily improved, and was discharged quite well on the 45th day.
6	M. B.	Portman Square	37	S.	March 16	Fibroid tumour of uterus causing severe pain and menorrhagia, with difficulty at times in micturition; small cyst of right ovary	Both ovaries and Fallopian tube removed	No	No	R.	Patient made an excellent recovery. In July, 1894, she was quite well and strong, and had not menstruated since the operation. The tumour was smaller.
7	A. M.	Camberwell	24	M.	April 19	Chronic pelvic peritonitis, with retroversion and fixation of the uterus and prolapse of ovaries	Adhesion to back of uterus separated and the uterus kept in position by insertion of a Hodge's pessary; both tubes and ovaries also freed from their adhesions to surrounding parts	No	No	R.	Patient made a normal convalescence. The pessary was removed on the 16th May and the uterus found in good position. She reported herself on April 19th, 1895, and had been quite free from pain since operation.
8	E. M.	Lambeth	43	M.	May 6	Large fibroid tumour of cervix causing pressure on neck of bladder and ureters	Exploratory laparotomy. It was found to be impossible to remove the tumour	No	No	D.	Patient was extremely ill on admission, and was suffering from retention of urine with cystitis. The fibroid was found to be filling up the pelvis and quite immovable. At the autopsy both ureters were dilated, together with the pelvis of the kidney, and contained puriform fluid; there was suppurative inflammation of the kidney, with several subcapsular abscesses in the right kidney.

No.	Name.	Residence.	Age.	Civil condition	Date of operation.	Nature of disease.	Nature of operation.	Glass drainage tube.	Periton. flushed.	Result.	Remarks.
					1894						
9	A. H.	Cornwall	41	M.	May 17	Fibroid tumour of uterus causing menorrhagia and difficult micturition	Both ovaries and Fallopian tubes removed	No	No	R.	Patient made an uninterrupted recovery. On January 28, 1895, she was quite well and strong, and had had one attack of metrostaxis since the operation.
10	E. Z.	New Cross	42	M.	June 7	Pelvic abscess, secondary to pelvic cellulitis	Exploratory abdominal section; abscess subsequently opened by incision above Poupart's ligament	No	No	R.	In this case the abscess was deeply seated in the pelvis, and did not show any tendency to point above Poupart's ligament. An exploratory incision was made in the middle line, as it was thought that the abscess was intra-peritoneal. The nature of the case being discovered, the abscess was opened above Poupart's ligament and drained. After this the temperature fell to normal, and patient made a good recovery.
11	H. L.	Notting-ham	32	M.	June 16	Subperitoneal fibroid of uterus, associated with pregnancy at the 7th week	Myomectomy	No	No	R.	Patient made an uninterrupted recovery. The progress of pregnancy was not interfered with by the operation.
12	C. V.	Edmonton	33	M.	July 16	Pregnancy, with very marked anteflexion of uterus	Exploratory laparotomy	No	No	R.	In this case the patient had missed two periods before admission, and a tumour was to be felt depressing the anterior fornix and reaching up to the umbilicus. There were only slight signs in the breasts. The case was considered to be probably a dermoid cyst of the ovary associated with early pregnancy. At the operation the whole tumour was found to be uterine, very markedly anteflexed.
13	L. S.	Blackfriars	28	M.	Sept. 6	Carcinoma of omentum involving intestine; ascites; pleuritic effusion on right side	Exploratory laparotomy (12 pints of ascitic fluid removed)	No	No	D.	The ascites soon re-formed after the operation, and the weakness and prostration steadily increased owing to extension of the disease. She was unable to take any food, and died from exhaustion on the 17th day after operation.

	B.					fibroid tumours of uterus	Exploratory incision	No	No	R.	The fibroids were fixed to the surrounding structures and to the floor of the pelvis by firm vascular adhesions, and had also grown out between the layers of the right broad ligament. It was therefore not thought advisable to attempt removal. Patient made a good recovery.
15	E. L.	Titchmarsh	43	M.	Sept. 13	Large fibroid tumour of the cervix complicating pregnancy at the 5th month	Cæsarean section with oöphorectomy	No	No	D.	See "Abstract."
16	A. L.	Hampstead	29	M.	Sept. 20	Wandering spleen	Exploratory laparotomy	No	No	U.	In this case the tumour formed by the enlarged spleen was situated for the most part in the left iliac region, but could easily be moved over to the right side, and was sometimes found in the pelvis, bulging down the anterior fornix. As it was thought possible that the tumour might prove to be ovarian, an exploratory incision was made and the nature of the case discovered. It was not thought advisable to interfere further.
17	E. F.	Wandsworth	61	W.	Sept. 21	Large fibroid tumour of uterus, undergoing gangrenous degeneration in its central portion	Abdominal hysterectomy (weight of tumour removed 25½ lbs.)	No	No	D.	See "Abstract."
18	E. P.	Bermondsey	36	M.	Oct. 11	Fibroid tumour of uterus causing pain and menorrhagia for 3 yrs., and constant sickness for 3 weeks before admission	Abdominal hysterectomy (weight of tumour removed 2 lbs. 5 oz.)	No	No	R.	Patient made an excellent recovery. At examination on Nov. 5 the cervical stump was found to be freely movable, and felt very like the normal uterus. She was discharged from hospital on Nov. 14.

Case 2. *Fibro-myoma of uterus; abdominal hysterectomy with intra-peritoneal treatment of stump; recovery* (from notes by R. Fox-Symons).—M. A. C—, æt. 32, married, residing at Bermondsey, admitted 11th January, 1894; discharged 10th March, 1894. Catamenia began at the age of twelve, always regular every four weeks, periods lasting four days, loss rather excessive but no severe pain. Patient was married sixteen years ago; no children, no miscarriages. Patient first noticed a swelling in the middle line of her abdomen two years ago after an attack of influenza. It has gradually increased in size, and during the last twelve months she has experienced a great feeling of weight in the abdomen with backache and shortness of breath. She has also had severe aching in the back of the thighs and calves during the same period, with some frequency of micturition. The bowels have been somewhat constipated of late. During the two years that patient has noticed the tumour there has been no appreciable alteration in the menstrual flow, with the exception of a slight increase in the amount lost during the last three or four months.

On admission, patient is a stout, healthy-looking woman, without any appearance of anæmia. The abdomen is uniformly and moderately distended, there being some prominence in the hypogastric and umbilical regions. On palpation a hard tumour can be felt rising up out of the pelvis and filling the hypogastric and umbilical regions, and extending outwards to the iliac regions on either side. The upper limit of the tumour reaches a hand's breadth above the umbilicus. The tumour is freely movable and free from tenderness, and is dull on percussion. The girth at umbilicus is 40 inches. *Per vaginam* the cervix is pushed well upwards and to the left, the sound passing $4\frac{3}{4}$ inches towards the left side. The anterior vaginal wall on the right side is slightly depressed by the mass. There is no depression of the posterior fornix, and the tumour cannot be felt by the fingers through the posterior fornix. The vaginal portion of the cervix projects the normal distance into the vagina. Urine is acid, sp. gr. 1032, contains no albumen, but a thick deposit of urates.

In consequence of the great discomfort caused by the tumour, patient was anxious to have some operation done to relieve her.

Abdominal section (18th January).—An incision 4½ inches in length was made in the middle line 2½ inches below the umbilicus. The peritoneum having been opened, it was now found necessary to prolong the incision upwards to the umbilicus, and downwards to the pubes. On passing the hand into the abdomen, the tumour was felt to be quite free from adhesions, and was found to dip down by the side of the cervix on the right side. The tumour was then with some difficulty brought out through the abdominal wound. A puncture was now made with a scalpel through the right broad ligament below the level of the ovarian artery, and the opening thus made was further enlarged by expanding a pair of artery forceps passed through the puncture. Two silk ligatures were then passed through, one being tied close up to the tumour and embracing the upper part of the broad ligament, and the other securing the infundibulo-pelvic ligament with the ovarian artery. The broad ligament on the left side having been ligatured in a similar manner, it was divided on each side between the ligatures. The inner ligature applied close up to the tumour was of use merely in preventing regurgitation of blood from the uterus during the rest of the operation. The next step in the operation consisted in securing the uterine arteries at the lower part of the tumour.

The position of the artery on either side having been determined by feeling the pulsating vessels, a silk ligature was passed on a sharp needle on handle, and the artery with the peritoneum covering it was secured on each side. Next two curved incisions were made over the anterior and posterior surfaces of the tumour through the capsule of uterine tissue, and the tumour was then shelled out by means of the fingers from the lower portion of the uterus. A large mass of uterine tissue with the left ovary attached was now trimmed off with a scalpel, so as to leave two convenient flaps of peritoneum with a thin layer of muscular tissue to cover in the stump. As there was some oozing from the

raw surface, a further ligature was passed on either side of the stump to further secure the uterine artery. The two peritoneal flaps were now inverted over the stump and brought together by means of eight silk sutures passed after the Lembert fashion. The mucous membrane of the cervical canal was not removed, but the latter was left open, so that any oozing from the inner surface of the flaps or cervical stump might escape *per vaginam*. The abdominal cavity having been cleaned with marine sponges, the edges of the wound were brought together by means of eight silkworm-gut sutures passed through the whole thickness of the abdominal wall. A glass drainage-tube was inserted in the lower angle of the wound, passing down into the pouch of Douglas. Two superficial sutures of silkworm gut were passed.

The tumour removed measured $7\frac{1}{2} \times 6 \times 4$ inches, and weighed 3 lbs. $10\frac{3}{4}$ oz. Over the upper part of the fibroid is a cap of thickened uterine tissue, the main mass of the tumour consisting of a large hard fibroid growing in the right and posterior wall of the uterus, and pushing the uterine canal forwards and to the left. Two or three smaller subperitoneal fibroids project outwards from the main mass. Both ovaries were enlarged, and the left presented a few small cysts on section.

19th.—The wound was dressed at 9 p.m. last night, and $2\frac{1}{2}$ drachms of blood-stained serum were removed with a pipette. Two more drachms were removed at 1 a.m., and at 11 a.m. this morning the drainage-tube was removed. Patient has had some vomiting during the night, and complains of very great thirst, for which rectal injections of hot water were ordered.

20th.—The vomiting and thirst are still troublesome. Pulse is 100 and temperature 104·4°. A simple enema was given at noon with good result. During the day patient has been able to keep down only a little water. There has been a good deal of blood-stained discharge from the vagina since the operation.

22nd.—Vomiting continued all day yesterday, with a feeling of heaviness in the epigastrium. Five grains of calomel were given without result, and were followed by a

simple enema, which acted very well. To-day the patient has a flushed appearance, and lies in rather an apathetic condition. The vomiting remains as before, and pulse and temperature are normal. Another simple enema given at 4 p.m. resulted in the passage of flatus and fæces. At 9.30 p.m., as the patient was much exhausted with the constant retching, food by the mouth was stopped, and feeding by nutrient enemata started.

23rd.—Patient is much more comfortable, and has lost the pain in the epigastrium. There has been no more sickness. Temperature 97·8°; pulse 98. Discharge from the vagina is less in amount.

25th.—There has been no more sickness since the last note. Rectal feeding has been continued every six hours up till to-day, when it was stopped, and patient was allowed liquid food by the mouth, which was retained.

26th.—Bowels opened three times after liquorice powder. Patient is now taking milk and beef tea, and tea and toast. Stitches were removed to-day, and the wound was afterwards firmly strapped, as patient has a troublesome cough.

29th.—Patient going on well. There is a little superficial suppuration in the wound, which is dressed with boracic lint. Cough is better.

31st.—On examining the urine yesterday it was found to be strongly alkaline with offensive odour, and contained a small quantity of pus. Patient has had pain on micturition for the past three days. The bladder is being washed out with boracic lotion. The blood-stained discharge from the vagina has now practically stopped.

February 3rd.—There is now no pain on passing water, which is acid and free from offensive odour. Cough is still troublesome, but otherwise patient's condition is quite satisfactory.

9th.—Patient had one or two slight shivering attacks yesterday, temperature reaching 102·8° at 5 p.m. This morning it is 98·6°. There is some dulness over the base of the left lung, with weak breath-sounds. The cough, however, is easier.

12th.—During the last three days the temperature has been above 100° F. every evening. The breath-sounds over

the right base are accompanied by coarse râles and sibilant rhonchi; the dulness is less.

17th.—Wound is nearly healed. Patient feels very weak, and temperature has been normal since last note.

20th.—Got up for the first time last night.

28th.—During the past few days patient has been much troubled with constipation, and has had a return of the sickness, which at the onset was accompanied with temp. 100·4°. Within twenty-four hours the temperature dropped to normal, and remained so although the sickness persisted.

March 1st.—After treatment with enemata followed by calomel, the bowels were well relieved, and the vomiting entirely stopped. Patient looks very much brighter, and is free from abdominal pain.

6th.—Patient has kept quite well since the last note. On vaginal examination the cervix is freely movable, and the stump feels like a normal uterus. There is no thickening anywhere to be felt.

10th.—Discharged home.

Case 14. *Large fibroid tumour of the cervix uteri complicating pregnancy at the fifth month; abdominal section; fœtus removed by Cæsarean section and uterine appendages removed on both sides; death from shock* (from notes by E. O. Thurston).—E. L—, æt. 43, married, residing at Titchmarsh, Northamptonshire, admitted September 5th, 1894; died September 14th, 1894.

Menstruation began at the age of fifteen, always quite regular, but rather profuse. Married at the age of twenty-three, and has had nine children and three abortions. The last pregnancy terminated in a miscarriage at the fifth month three years ago. The last menstrual period before her admission to the hospital was on the 19th April, 1894. Soon after the miscarriage, which occurred three years ago, patient noticed a lump in her abdomen to the left of the navel, which has steadily increased in size, and which for the last four months has increased much more rapidly and more particularly on the right side. From time to time, and especially during the last few months, patient has suffered from attacks of abdominal pain, which have been

sufficiently severe to keep her in bed for a day or so. She has also had frequency in passing water, which, however, has caused less trouble during the last fortnight.

On admission, patient is a strong, healthy woman, with considerable enlargement of the abdomen, especially noticeable on the right side. Very enlarged veins are seen over the surface of the abdomen. The abdomen is occupied by a large mass which varies in consistence, the part over the left side being harder and presenting a lowly nodulated surface, and the portion on the right side being smoother and more elastic. Ballottement can be felt at the upper and right part of the tumour. A sulcus is seen crossing the tumour from the upper and right portion downwards and to the left. There is dulness over the tumour. No fœtal heart can be heard. Urine is acid, sp. gr. 1020, no albumen or sugar.

Measurements:

Greatest girth (at umbilicus) . . .	45 inches.
From pubes to umbilicus . . .	8½ ,,
,, umbilicus to ensiform cartilage .	12½ ,,
,, ,, right superior iliac spine	12 ,,
,, ,, left ,, ,,	13 ,,

September 8th.—On examination *per vaginam* under ether, the vaginal roof was found depressed by a conical swelling of firm consistence. The os uteri is situated high up behind the symphysis and a little to the right, and is rather difficult to reach; it just admits the tip of the finger. The swelling gives the impression of a large solid tumour growing in the cervix. Dr. Herman examined the case with Dr. Cullingworth, and it was decided to perform an exploratory abdominal section.

12th.—Fœtal heart was heard to-day for the first time at the right and upper part of the tumour. Patient has felt fœtal movements since a fortnight before her admission.

Abdominal section (September 13th).—An incision 4 inches long was made in the middle line extending downwards from half an inch below umbilicus. The peritoneum having been opened, the incision was enlarged upwards, and the hand introduced into the abdomen. A large tumour having the appearance of the pregnant uterus was now seen

presenting in the wound, and a large lobulated mass of fibroid growth was found extending outwards to the left of this. The reflection of peritoneum from uterus and bladder to the anterior abdominal wall was at a much higher level above the symphysis than usual, being pushed upwards by the fibroid tumour. Another large mass of tumour was found growing upwards and outwards to the right. In order to facilitate the examination of the tumour, and to determine the part of the tumour containing the fœtus, the incision was further enlarged upwards for $1\frac{1}{2}$ inches, and the tumour brought out through the incision. A small incision was made through a portion of the tumour, which was thought to contain the fœtus, but it was found to be a soft myoma, and the incision was subsequently closed by means of five fine silk sutures. On further examination an elastic tumour of purplish colour was discovered at the right and posterior aspect of the main mass, and it was then quite evident that this was the pregnant uterus. This was brought into view, and an incision $4\frac{1}{4}$ inches long was made through the uterine wall, which was followed by the escape of the liquor amnii. There was rather free hæmorrhage from the uterine wall, which was controlled by an assistant grasping the uterus at the lower part on either side, so as to compress the vessels in the broad ligament. The fœtus was now delivered through the incision in the uterus and the placenta removed. The uterus contracted well, and the incision was sewn up by means of seven deep silk sutures passing through the serous and muscular layers, and then seven half-deep sutures. The next step in the operation was the removal of the uterine appendages, as it was seen to be impossible to remove the tumour, which was growing entirely from the cervix. The right appendages were brought into view, and a double silk ligature having been passed through the broad ligament, the latter was tied in two sections, and the ovary and tube removed. The left appendages were very difficult to reach, and large masses of veins were seen in the broad ligament on this side. It was transfixed and ligatured in two sections in the same manner as on the right side. The uterus was now kneaded and returned into the abdomen, after which two

large masses of soft fibroid springing from the left side of the uterus at the junction of the cervix and body were returned. The total length of the incision was $9\frac{1}{2}$ inches, and it was now closed by means of seventeen deep sutures of silkworm gut and five superficial sutures of the same material. No douche or drainage was used.

Patient was greatly collapsed after the operation, the extremities remaining cold for a long time. She had a good deal of blood-stained discharge *per vaginam*. About 3 a.m. on the 14th she rallied for a short time, but soon relapsed again, and died from shock at 8 a.m.

The fœtus removed was $11\frac{1}{2}$ inches long, and weighed 1 lb. $2\frac{3}{4}$ oz. The placenta was well developed, $4\frac{1}{4} \times 5$ inches in diameter, and weighed 9 oz. The right ovary removed presented a well-marked corpus luteum of pregnancy. The left ovary was elongated, but otherwise normal.

Autopsy.—The whole abdomen was found to be completely filled by large masses of growth, which weighed altogether 22 lbs. The intestines were displaced upwards under the ribs, but did not appear to have suffered any interference with their functions. The ureters were spread over the lateral surface of the growth, but were not dilated or altered in any way. The bladder was dragged up on the anterior surface of the tumour, so that the highest point of the fundus was 6 inches above the pubes. The uterus lay behind and to the right of the mass. The tumour was found to arise by a broad base from the cervix; it was entirely covered by peritoneum, which in some parts stripped off readily, whilst in others it was puckered and adherent. The peritoneal covering was derived largely from the broad ligament, but other sources were obvious; thus, anteriorly, the parietal layer of peritoneum was reflected from the abdominal wall on to the tumour nearly 6 inches above the pubes; again, the layer of parietal peritoneum covering the back of the abdomen had been pushed up from the inner side of the ascending colon and sigmoid flexure by the tumour, and formed part of the covering of the mass. On section the tumour was extremely vascular in the superficial layers; the deeper parts were very tough and non-vascular. The tumour was in some parts laminated, in

others the appearance suggested the coalescence of a number of spherical masses of fibroids. There was no sign of any necrotic or degenerative change. The uterus measured 12 inches in length from external os to fundus. There were no signs of any myomatous growth in the body of the uterus. The other organs of the body were healthy.

Case 16. *Large fibro-myoma of uterus weighing* 25½ *lbs.; gangrenous degeneration; abdominal hysterectomy; peritonitis; death* (from notes by H. C. Barraclough).—E. F.—, æt. 61, widow, residing at Wandsworth, admitted September 20th, 1894; died September 25th, 1894. Catamenia began at the age of fifteen, twenty-one-day type, always regular, lasting two or three days. She was married at the age of thirty-nine, but has had no children, and no miscarriages. She has never suffered from excessive menstruation at any period of her life. The menopause occurred ten or eleven years ago, since when she has seen nothing. Nineteen years ago she says she had "inflammation of the bladder" and "abscess of the womb," and two years later she was in Adelaide Ward under the care of Dr. Gervis, and was then told she had a tumour about the size of a cocoa-nut, which has gradually increased in size. Patient did not have any serious inconvenience from the presence of the tumour till about eighteen months ago. She had a fall downstairs about Christmas, 1892, and hurt her leg badly, and after this she noticed that the tumour began to grow very rapidly, and has continued to do so up to the present time. During the last three weeks she has been getting much thinner, and has suffered from bilious attacks and loss of appetite, and during the last five days has had great difficulty in keeping her food down owing to vomiting. During the last two years she has had occasional difficulty in passing her water, but has never had retention. She now suffers very great pain over the tumour, and also in the loins and down the thighs, and cannot lie down in bed with any comfort.

On admission, patient is a very thin woman, with an enormously distended abdomen, over which dilated veins are seen coursing. As the patient lies in bed, the tumour,

which fills the whole abdomen, forms a very prominent mass, the highest part of which is 14 inches above the level of the bed. A very slight fluid thrill is obtained over the tumour. There is dulness over the whole area of the tumour, but resonance in the flanks and for a finger's breadth below the costal margin.

Measurements :

Girth at level of umbilicus . . .	40 inches.
,, one inch above umbilicus . .	41 ,,
Pubes to umbilicus	14 ,,
Umbilicus to ensiform	9 ,,
,, ,, right ant. sup. spine . .	$12\frac{3}{4}$,,
,, ,, left ant. sup. spine . .	13 ,,

Per vaginam the tumour causes depression of the vaginal roof, descending to within an inch and a half of the vulva. The os uteri is out of reach.

Abdominal section (September 21st).—Patient was placed under ether, and an incision 12 inches long made in the middle line. After slightly enlarging the incision, the tumour was slowly delivered through the wound. On each side of the tumour large vessels were seen extending over the tumour. The upper part of the broad ligaments including the ovarian artery was first ligatured on each side in two places, and divided between the ligatures. Next the uterine arteries were sought for, and were found at the lower and anterior part of the tumour, one on each side of the bladder, which could be plainly seen at the lowest part of the tumour. The right uterine artery was as large as a pencil. Hot towels were kept over the surface of the tumour, to avoid chilling of the patient, and were frequently changed. The uterine arteries were now secured by passing an aneurism needle threaded with silk under the vessel on each side, the ligature round the artery thus including a small portion of peritoneum. Two silkworm-gut sutures were now introduced to bring together the upper part of the wound, so as to keep the intestines from protruding. The tumour being pushed upwards, a transverse incision was made over the anterior wall through the uterine capsule down to the surface of the fibroid. There was very little hæmorrhage at this stage of the operation.

The mass was then drawn downwards, and a similar incision uniting the ends of the first was made over the posterior surface of the tumour. The tumour was then enucleated from the lower portion of the uterus by means of the fingers, and the scissors when necessary. After the removal of the main mass, which weighed 20 lbs. 12 oz., three other small fibroids were enucleated from the lower segment of the uterus, which together weighed 4 lbs. There was some hæmorrhage now from a small vessel in the uterine wall, which was ligatured. The stump of uterine tissue which was left was now trimmed down with scalpel so as to form two thin flaps consisting of peritoneum and a small amount of uterine tissue. The cervical canal was not seen during the operation. The divided edges of the broad ligament were now brought together on each side with three or four silk ligatures, and while this was being done the left ureter was very clearly felt running downwards and forwards to the bladder. The peritoneal edges of the flaps were now turned in, and the two flaps brought together by means of seventeen silk sutures inserted after Lembert's method. The size of the stump was now found to be about that of a fœtal head. On examination *per vaginam* there was found to be a slight depression of the posterior vaginal fornix, but the large mass previously present had disappeared. A large flat marine sponge having been placed over the intestines, the edges of the wound were united by means of twenty-four sutures of silkworm gut. The wound was dressed in the usual manner. Throughout the operation, which lasted two hours and a half, the patient's pulse and general condition remained very good.

The main portion of the tumour removed consists of a very large lobulated fibroid tumour, with a shell of uterine tissue, varying from half to one inch in thickness over the upper half of its circumference. The ovary and left Fallopian tube are attached to the tumour. The right ovary and tube were removed in the course of the operation. The lower surface of the fibroid is fairly smooth where it has been enucleated from the lower segment of the uterus. The uterine canal is seen divided at the cut surface of the uterus, and is much expanded, measuring 4 inches

long by $2\frac{1}{2}$ inches transversely. Several small fibroids project into the cavity of the uterine canal. On longitudinal section through the tumour the latter is seen to be in greater part solid; in one part, however, a large irregular excavation about the size of a fœtal head is exposed. The walls of this cavity are ragged and sloughing, and the portion of the tumour around presents a yellowish-grey mottled appearance, due to necrotic change in the fibroid. The cavity contained dark greenish fluid, with an offensive fishy odour. The tissue composing the wall of this cavity is very soft and friable, and the tumour in this situation is evidently the seat of extensive gangrenous change.

September 22nd.—Patient is very comfortable this morning, and considering the severity of the operation her condition is quite satisfactory. The temperature at midnight was 100° F., with pulse 130. At noon to-day it is 101·2° F., and pulse is 120. There is no vaginal discharge.

23rd.—Passed urine naturally early this morning. At 2 p.m. the abdomen was found to be very much distended, and an enema was given with very good result.

24th.—The distension of the abdomen has returned, and patient began vomiting some bile-stained fluid this morning. A rectal tube was passed with very little result. An enema was given at noon, and some flatus passed. Temperature during the day varied between 99·8° F. and 101° F., pulse 114 to 126. There is still no blood-stained discharge *per vaginam*.

25th.—Patient has passed no more flatus since the enema was given yesterday. The vomiting continued up till midnight, when it stopped after an injection of 5 minims of morphia hypodermically. Patient has been fed during the night with nutrient enemata. At 10.30 this morning an enema was given with good result, and the general condition is no worse. Later on in the afternoon the pulse began to fall again, and she became rather rapidly worse. At 8 p.m. the temperature was 101°, with pulse of 150. She died at midnight.

Autopsy (fourteen hours after death).—On reopening the

peritoneal cavity it was found to contain a little blood-stained fluid, and the intestinal coils were glued together with a thin layer of lymph. On drawing forwards the pelvic viscera, a collection of dark blood was found in the pouch of Douglas. The ureters were dilated to about one third of an inch in diameter for their whole length. The pelvic viscera having been removed *en masse,* the bladder was found quite healthy; the vagina was small and smooth throughout; the cervix uteri was of small circumference, but much elongated and bent backwards upon itself; it was pervious. When opened up, the peritoneal flaps were found to roof in a cavity containing offensive grumous material. The lower part of this cavity was formed by the stump of the uterus. After the backward bend in the cervix had been reduced, a probe could easily be passed along the cervix into the cavity before mentioned, but it was quite clear that no drainage had taken place during life from the stump *per vaginam.* The descending colon was almost entirely collapsed, the rest of the large and small intestines being distended with gas and fluid. There was extensive emphysema of the lungs, with some collapse at the bases. The right side of the heart was distended, and contained partly decolourised blood-clot, somewhat adherent. This clot extended along the pulmonary artery, where, however, it was shrunken and non-adherent. Other viscera were healthy.

STATISTICAL REPORT

OF

THE OPHTHALMIC DEPARTMENT

FOR THE YEAR 1894.

By J. HERBERT FISHER, M.B., B.S.Lond., F.R.C.S.Eng.

During the year there were 3784 new out-patients (exclusive of renewed letters), 242 in-patients were admitted, and 267 major operations were performed. Total attendances in Out-patient Department 11,754.

Table of In-patients.

Cataract, senile	51	Staphyloma of cornea	2
„ lamellar	12	Corneal nebulæ	1
„ congenital	6	Adherent leucoma	9
„ traumatic	7	Occluded pupil	1
Membrane after extraction	10	Conjunctivitis, simple	6
Glaucoma, acute	2	„ diphtheritic	2
„ subacute	7	Pterygium	1
„ chronic	13	Ectropion	5
Iritis, syphilitic	3	Entropion	1
„ rheumatic	3	Chronic œdema of lids	2
„ gonorrhœal	1	Lacrimal abscess and mucocele	5
Irido-cyclitis	1	Rodent ulcer	2
Kerato-iritis	3	Graves's disease	1
Interstitial keratitis	6	Strabismus, convergent	7
Sclero-keratitis	3	„ divergent	1
Episcleritis	2	Ophthalmoplegia, externa	1
Sympathetic ophthalmitis	1	„ externa and interna	1
Corneal ulcers, hypopyon, serpiginous, &c.	11	Hæmorrhage into vitreous	1
„ chronic and relapsing	5	Suppurative panophthalmitis	3
		Shrunken globes	2
		Retinitis	2

Detachment of retina	5
Toxic amblyopia	1
Papillitis	1
Post-papillitic atrophy	1
Primary optic atrophy	2
Syphilitic choroiditis	1
Tumours of choroid	2
Foreign body in orbit	1
Orbital tumours	5
Glandular carcinoma	1
Sarcoma of globe and orbit	2
Nævus of orbit	1
Hydatid cyst	1
Wound of eyelid	1
Wound of globe	13
Rupture of globe	6
	242

The following is a list of the chief operations performed:

Extraction of hard cataract		55
Operations for treatment of 21 soft cataracts		43
Needling of congenital	27	
„ of traumatic	1	
Curette evacuation	11	
Suction extraction	3	
Extra-ocular iridotomy	1	
Discission of membrane after extraction		25
Extraction of membrane with forceps		5
Iridotomy		3
Iridectomy		56
For acute and subacute glaucoma	9	
For chronic glaucoma	11	
Preliminary to extraction	7	
For prolapse of iris	9	
„ adherent leucoma	4	
„ artificial pupil	14	
„ blocked pupil	2	
Division of anterior synechia		2
Sclerotomy for glaucoma		1
Tattooing of cornea		1
Saemisch's section		1
Cautery to conjunctiva		1
„ to cornea		4
„ to lacrimal sac		1
Extirpation of lacrimal sac by dissection		3
Ditto., by scraping		1
Conjunctival suture over corneal wound		1
For pterygium		1
Canaliculus opened for blocked punctum		1
Blepharoplasty		4
For ectropion		1
Tenotomy of internal rectus		13
„ of external rectus		2
„ of inferior rectus		1
Advancement of internal rectus		2
„ of external rectus		6
For rodent ulcer		2
Excision		25
Removal of foreign body from orbit		1
„ of orbital growths		5
		267

Analysis of Cataract Operations.

I. Extraction of hard cataract—55.

The section was made upwards in all cases except No. 15, which was the treatment of a residual cataract by needling, followed by removal of shrivelled lens and capsule with forceps.

Of Mr. Nettleship's cases, Nos. 13 and 17 were extracted without iridectomy; in the case of No. 10, iridectomy was done after expression of lens, as the iris could not easily be replaced. In several cases the extraction with iridectomy was done in two stages, the first stage having been previously performed elsewhere, or this method of operating being selected here for special reasons. In cases Nos. 4, 5, 6, 12, 13, 14, 16, 17, 20, 21, 22, 27, the section was made without the use of fixation forceps, and in many of them without a lid speculum being employed. Of these it is interesting to note that while Nos. 13 and 17 got good vision without the use of cylinder lenses, Nos. 4, 12, 14, 20, 21 all had considerable astigmatism needing correction in prescribing glasses, while No. 27 had, when first tried, 2·5 D. of astigmatism, which subsequently subsided. In Nos. 5, 6, 16, 22, the vision was such that the patient would hardly be expected to appreciate the necessity or otherwise of a cylinder. The high degree of astigmatism in some of the above cases, and the fact that of the other twenty-three cataracts operated on by Mr. Nettleship, cylinders were requisite in only six instances, seems to render it worth while to draw attention to these figures, although the numbers are of course too small to justify one in attributing the greater frequency of astigmatism to excessive flattening of the vertical meridian of the cornea in making the section without using fixation forceps.

In the two extractions completed without iridectomy eserine was dropped into the eye at the close of the operation, and used on each of the two succeeding days, atropine being substituted on the third. In all other cases atropine was used to the eye when the anterior chamber had become securely sealed.

In Nos. 18 and 35 a sharp hook was used to extract the lens.

Of Mr. Lawford's cases, in Nos. 40 and 44 the lens was extracted with Pagenstecher's spoon, as it was found movable on using the cystitome, indicating an imperfect suspensory ligament; No. 40 lost a little vitreous but did very well. No. 44 lost no vitreous. In Nos. 43 and 46 no iridectomy was done at the time of extraction; in each the other eye had been prevously operated on without iridectomy. Iris prolapsed and was removed in No. 46 the next morning; while in No. 43 swelling of some remaining lens-matter seems to have caused a gradual protrusion of iris, which was removed by iridectomy thirteen days after extraction.

In all cases atropine was used when the wound was considered sufficiently sound; in Nos. 43 and 46 eserine was used at close of the extraction. As to anæsthetics, in No. 18 chloroform was given, general anæsthesia being considered advisable in the difficult attempt made to remove the nucleus of a Morgagnian cataract dislocated into a. c. by a blow, and the eye being tender from associated iritis. In the case of No. 40 chloroform was administered to a patient devoid of self-control whose first eye had been lost after extraction elsewhere. In all other cases a fresh sterile 2 per cent. solution of hydrochlorate of cocaine was the anæsthetic used.

II. Operations for treatment of soft cataract—21 cases.

No. 58 is included under this heading, although the patient was forty-nine years of age, as the nucleus was small and the cataract was chiefly composed of soft lens matter which had become opaque and swollen rapidly during the three weeks after the wound of capsule. No. 61 was also a traumatic cataract, and No. 62 an anomalous form of congenital cataract. The other nine of Mr. Nettleship's soft cataracts were of lamellar type, and treated by needling or needling with curette evacuation.

Mr. Lawford treated nine soft cataracts; No. 76 was caused by direct wound of lens capsule, No. 74 was a concussion cataract.

In three cases the syringe was used to remove lens matter

by suction; five curette evacuations were performed, and No. 75 was treated by extra-ocular iridotomy, the lamellar shell of opacity being unusually small with a good deal of clear cortex between its periphery and the equator of the lens.

TABLE I.—*Extractions of Hard Cataract.—Mr. Nettleship's Cases* (35).

Page in Bk. '94.	Report No.	Name and date.	Sex.	Age.	Anæsthetic.	Operation.	Progress of case.	Secondary operation.	Result.
5	1	F. C. Jan. 4th	F.	—	Cocain	Left; extraction up with iridectomy; large piece of capsule withdrawn with forceps; some thin vitreous lost; some opaque lens matter left at outer part of coloboma. Field to light unsatisfactory before operation, which was done for cosmetic reasons	Fairly satisfactory	Feb. 2nd, 1894—Tenotomy of left internal rectus and advancement of external rectus	February 20th—+8 D. = Hand movements at 3′.
4	2	C. W. Jan. 5th	F.	62	,,	Right; extraction up with iridectomy; lens small and hard, came out well and clean. Eye known to be myopic to the extent of 5·D.	Favorable	None	March 9th—+4 D. = $\frac{6}{9}$ fairly. +9 D. = 1 J. at 7″, not at greater range.
15	3	J. H. Jan. 19th	M.	75	,,	Preliminary iridectomy had been done upwards March 13th, 1885. Right; extraction up; lens soft and sticky; a good deal remained behind in lower part	Some local atropine irritation and slight general symptoms	July 24th, 1894—Needled	July 31st—+11 D. = $\frac{6}{36}$. +16 D. = 10 J. Some floating webs in vitreous, and cholesterin spangles in y. s. region.
23	4	W. B. Feb. 9th	M.	61	,,	Left; extracted up with iridectomy; no fixation forceps used in making section; lens hard, with a small quantity of milky cortex. Pupil left black	Favorable	None	March 10th—$\frac{+9 \text{ Ds.}}{+4 \text{ Dcyl.}} = \frac{6}{12}$, 3 or 4 letters. $\frac{+12 \text{ Ds.}}{+4 \text{ Dcyl.}} = 6$ J.
23	5	W. B. Feb. 23rd	M.	61	,,	Right; extraction up with iridectomy. Operation a fortnight after extraction of left. Again no fixation forceps employed; anterior chamber shallow; capsule not well opened; much soft lens matter	Favorable; some capsule evident in pupil	None	March 10th—+9 D. = $\frac{6}{60}$. +13 D. = 14 J. Eye not quite quiet.

27	6	A. L. Feb. 23rd	F.	37	„	Had had corneal ulcers. Double iridectomy had been done upwards elsewhere, about 1880; capsule of lens in right had evidently been wounded, an indication of such was evident on capsule. Right; extraction upwards; eye not fixed; lens sticky	Favorable	None	March 10th— +10 D. Counts fingers at 7 feet. +14 D.=20 J.
14	7	G. T. March 13th	M.	65	„	After preliminary iridectomy on right on Jan. 18th, 1894, at which, patient being restless, lens was wounded, iritis and suppuration of wounded lens quietly supervened. Was advised excision, but refused. March 13th.—Attempted extraction of lens; some soft matter escaped, after which chlorine water was injected into anterior chamber.	Suppuration continued in wound, and plastic lymph formed in anterior chamber	March 16th—Lymph extracted with forceps from anterior chamber	Eye eventually became quiet and patient went out; the eye remained soft. Would not consent to excision.
42	8	M. K. April 13th	F.	76	„	Right; extraction with iridectomy up; lens hard and came out clean. Some air-bubbles left in anterior chamber	Favorable; anterior chamber formed slowly; some adhesions of iris to capsule broke down on use of atropine, commenced on fourth day	None	July 19th— +12 D.=$\frac{6}{24}$. +15 D.=4 J.
49	9	E. P. April 20th	F.	60	„	Left; extraction upwards with iridectomy; lens large and soft. Iris pricked during incision. Small coloboma	Favorable	None	July 20th— +13 D.=$\frac{6}{12}$ partly. +18 D.=1 J. slowly.
51	10	M. W. April 20th	F.	62	„	Left; extraction up attempted without iridectomy, but after expression of lens, as the iris would not go back readily, iridectomy was performed	Favorable; iris a little drawn back and adherent to capsule below	None	July 24th— $\frac{+12 \text{ Ds.}}{+2 \text{ Dcyl.}}$=$\frac{6}{18}$, $\frac{6}{12}$, 1 or 2 letters. $\frac{+16 \text{ Ds.}}{+2 \text{ Dcyl.}}$=2 J. and 1 J. fairly.

Page in Bk. '94.	Report No.	Name and date.	Sex.	Age.	Anæsthetic.	Operation.	Progress of case.	Secondary operation.	Result.
17	11	J. F. April 27th	M.	63	Cocain	Preliminary iridectomy had been done upwards in both, January 12th, 1894. Right; extraction upwards; incision nearly coincided with sclero-corneal junction; pupil left nearly black	Favorable	Needled on Jan. 23rd, 1895	Jan. 28th, 1895— $+10$ D. $=\frac{6}{24}$. $+15$ D. $=6$ J.
59	12	J. L. May 4th	M.	78	„	Right; extraction upwards with iridectomy. No speculum or fixation forceps were used. Lens hard, and came out almost complete	Favorable	None	July 20th— $\frac{+10 \text{ Ds.}}{+2 \text{ Dcyl.}} = \frac{6}{36}$. $\frac{+15 \text{ Ds.}}{+2 \text{ Dcyl.}} = 1$ J. slowly.
61	13	E. D. May 11th	F.	72	„	Right; extraction upwards without iridectomy. No speculum or fixation forceps used when making section. Eserine on table after replacing iris, and again one hour later in ward; pupil not quite black; iris pricked with Graefe	Favorable; eserine used next two days; replaced by atropine on the third	None	July 20th— $+11$ D. $=\frac{6}{9}$ completely. $+16$ D. $=1$ J. well.
59	14	J. L. May 18th	M.	78	„	Left; second eye a fortnight after extraction of right. No lid speculum or fixation forceps used. Extraction upwards with iridectomy. Free bleeding from iris obscured use of cystitome, and lens did not come very readily through a rather short incision; cornea thin and flaccid	Quite satisfactory	None	July 20th— $\frac{+10 \text{ Ds.}}{+2 \text{ Dcyl.}} = \frac{6}{6}$, 3 letters. $\frac{+15 \text{ Ds.}}{+2 \text{ Dcyl.}} = 1$ J. well.
131	15	A. G. May 18th	M.	42	„	Needling, followed by excision of membrane drawn out of pupil and snipped off with iridectomy scissors. No vitreous was lost. Cataract was probably a traumatic one; had been operated on Oct., 1890, and needled Dec. 1st, 1893. Pupil left quite clear	Favorable	—	May 25th— $+11$ D. $=\frac{6}{12}$, 3 letters. $=16$ D. $=1$ J. very fairly.

68	16	R. H. May 25th	F.	60	„	Right; extracted up with iridectomy; section made without use of fixation forceps; iris fell over blade of knife and was cut; counter-puncture too far in sclerotic	Slight iritis; fluted membrane in pupil	None; left is still a good eye	July 31st— +11 D. = $\frac{4}{60}$.
61	17	E. D. May 25th	F.	72	„	Left; extraction upwards without iridectomy; right had been operated in same manner a fortnight earlier; no speculum or fixation forceps used; eserine once on the table and again in ward one hour later	Eserine replaced by atropine on third day; slight adhesions of iris to remaining lens capsule	None	July 20th— +11 D. = $\frac{6}{15}$; 1 or 2 letters of $\frac{6}{12}$. +16 D. = 1 J. slowly, 2 J. well.
69	18	S. S. June 5th	F.	68	Chloroform	Left; attempted removal of nucleus of a Morgagnian cataract, dislocated into anterior chamber by a blow; iritis before operation, and eye not quiet at time of operation. Morgagnian cataract extracted from right in 1882; nucleus broke up in hook; the keratome incision being rather short was enlarged; nucleus then removed partly by curette, partly by expression; some left	June 19th.—Iris in contact with back of cornea. T. + 2. Severe pain	June 19th—Left excised	—
74	19	E. H. June 15th	F.	64	Cocain	Left; extraction upwards with iridectomy; lens hard and small	Favorable	None	June 27th, 1894— +8 Ds. = $\frac{6}{24}$; cyl. does not improve. $\bar{c}\frac{+12 \text{ Ds.}}{+1{\cdot}5 \text{ Dcyl.}}$ = 6 J.
38	20	M. R. June 15th	F.	73	„	Right; extraction upwards with iridectomy; no speculum or fixation forceps used; section quite accurate; cornea thin and collapsed after section; lens small and hard; ? a little lens matter left in wound	Slight bulging of scar; previous extraction of left, had left a cystoid and fistulous scar; bulging of scar subsided; anterior chamber took four days to form	None	June 29th— $\frac{+12 \text{ Ds.}}{+3 \text{ Dcyl.}} = \frac{6}{24}$. $\frac{+16 \text{ Ds.}}{+3 \text{ Dcyl.}}$ = 6 J.

Page in Bk. '94.	Report No.	Name and date.	Sex.	Age.	Anæsthetic.	Operation.	Progress of case.	Secondary operation.	Result.
79	21	M. A. S. June 29th	F.	58	Cocain	Right; extraction upwards with iridectomy; no lid speculum or fixation forceps employed; very little soft matter coaxed out after hard nucleus	Favorable; left was extracted January 7th, 1895, and did quite well; some membrane in pupil	Dec. 28th, 1894. —Right needled	Jan. 3rd, 1895— $+11$ Ds. / $+2$ Dcyl. $=\frac{6}{6}$, and 5 letters of $\frac{6}{6}$. $+16$ Ds. / $+2$ Dcyl. $=1$ J. well.
78	22	E. W. June 29th	F.	65	,,	Left; extraction upwards with iridectomy; no fixation forceps or lid speculum used; much soft cortical matter	Good deal of striped keratitis, which improved; much membrane in pupil, and swollen opaque lens matter	Nov. 2nd, 1894. —Needled, and then membrane divided with cutting needle; as it did not then gape, section made in cornea and membrane drawn out with iris forceps; pupil left black	$+11$ D. $=\frac{3}{60}$.
83	23	H. A. July 6th	F.	65	,,	Right; extraction upwards with iridectomy	Some iritis; blocked pupil; tension kept minus; recurrent slight atropine symptoms and local irritation	July 6th, '94— Iridotomy. Nov. 2nd— Needling. Nov. 23rd— Division of membrane in pupil with iridectomy scissors. On July 6th a little vitreous escaped	Eye eventually quieted. March 1st, 1895— T. n.; eye quiet; cornea and iris clear and bright; pupil still blocked by much membrane.
84	24	S. P. July 6th	F.	84	,,	Right; extraction upwards with iridectomy; lens came out fairly complete, being hard	Favorable	None	Sept. 4th— $+13$ D. $=\frac{6}{18}$ readily; would probably see more, but very illiterate. $+17$ D. $=1$ J.

85	25	E. M. July 13th	F.	52	„	Right; extraction upwards with iridectomy; lens hard; came out clean and complete	Some iritis. An aluminium shield was used to apply dressing after first day or two	None	Aug. 17th— + 14 D. = $\frac{6}{36}$. + 16 D. = 19 J. at 12″.
88	26	R. M. July 27th	F.	58	„	Right; extraction upwards with iridectomy; a little soft lens matter was left	Favorable	None	Aug. 10th— $\frac{+10 \text{ Ds.}}{+2 \text{ Dcyl.}} = \frac{6}{9}, \frac{6}{6}$ 2 let'rs. $\frac{+14 \text{ Ds.}}{+2 \text{ Dcyl.}} = 1$ J. fluently.
87	27	W. B. July 27th	M.	72	„	Right; extraction upwards with iridectomy; no speculum or fixation forceps used; cornea thin and flaccid; good section and conjunctival flap; rather free bleeding	Aluminium shield used to apply dressing on third day	Sept. 13th— Needled with an ordinary needle; membrane did not gape well	Sept. 21st— + 11 D. = $\frac{6}{24}$. + 16 D. = 10 J. Had 2·5 D. of astigmatism at first.
99	28	R. S. Aug. 3rd	F.	63	„	Left; extraction upwards with iridectomy; rather free bleeding into anterior chamber	Slight iritis; iris drawn back to a star-shaped membrane in pupil	None	May 30th, 1895— $\frac{+12 \text{ Ds.}}{+4 \text{ Dcyl.}} = \frac{6}{18}$ partly. $\frac{+16 \text{ Ds.}}{+4 \text{ Dcyl.}} = 1$ J. slowly.
90	29	E. O. Aug. 3rd	F.	63	„	Right; extracted upwards with iridectomy; some soft lens matter remained, could not be coaxed out	Adhesion of iris, which draws it back to some membrane below	None	Aug. 13th— V. less than $\frac{6}{60}$. + 13 D. words of 6 J.
113	30	H. B. Oct. 19th	F.	67	„	Left; extraction upwards with iridectomy; lens brown and hard, came away easily; pupil left black; uneven conjunctival flap	Favorable; intolerant of atropine	None	Dec. 9th— + 10 D. = $\frac{6}{15}$. + 14 D. = 1 J. very fairly well.
116	31	E. J. Oct. 26th	M.	47	„	Right; extraction upwards with iridectomy; cortex of lens soft. Patient known to be subject of left hemiopia and epileptiform attacks beginning in left hand and spreading to left side of body	Favorable	None	Jan. 4th, 1895— $\frac{+10 \text{ Ds.}}{+1 \text{ Dcyl.}} = \frac{6}{18}$. $\frac{+14 \text{ Ds.}}{+1 \text{ Dcyl.}} = 6$ J.

Page in Bk. '94.	Report No.	Name and date.	Sex.	Age.	Anæsthetic.	Operation.	Progress of case.	Secondary operation.	Result.
113	32	H. B. Nov. 9th	F.	67	Cocain	Right; extraction upwards with iridectomy; some soft matter expressed after hard nucleus; section at sclero-corneal junction; short conjunctival flap	Slight incarceration of iris in inner part of wound; slight local signs of atropine irritation as with left; Duboisine substituted	None	Dec. 9th— $+10$ D. $=\frac{6}{60}$. $+14$ D. $=10$ J.
117	33	J. H. Nov. 9th	F.	56	„	Left; extraction upwards with iridectomy; patient squeezed her lids, and herself expressed the lens after use of cystitome; no vitreous lost	Favorable	None	Jan. 24th, 1895— $+11$ D. $=\frac{6}{18}$. $+15$ D. $=4$ J.; words of 2 J.
122	34	J. T. Nov. 16th	M.	51	„	Right; extraction upwards with iridectomy; in making section iris fell over edge of knife and was cut. On breaking up the rather soft lens after removal, a small scale of iron or steel was identified with the magnet, embedded near the equator	Atropine irritation of lids; duboisine substituted, and irritation subsided	None	Jan. 14th, 1895— $\frac{+13 \text{ Ds.}}{+3 \text{ Dcyl.}} = \frac{6}{12}$, 1 letter. $\frac{+18 \text{ Ds.}}{+3 \text{ Dcyl.}}$ = letters of 1 J. easily. Not educated to read.
134	35	E. D. Dec. 7th	M.	45	„	Right; extraction upwards with iridectomy; counter-puncture of Graefe made too far in sclera; some vitreous presented and was cut away with iridectomy scissors; lens extracted with sharp hook. Left has congenital coloboma of iris; vision of left with correction $\frac{6}{12}$	Bleeding occurred into anterior chamber and vitreous; a bead of vitreous appeared in scar, but eventually shrivelled and scar flat. T $+\frac{1}{2}$	None	Feb. 27th, 1895— Eye quite quiet. Still much blood-stained capsule in pupil and coloboma, preventing any fundus reflex.

2	36	C. S. Jan. 8th	M.	43	Cocain	Right; extraction upwards with iridectomy; incision too peripheral at counter-puncture, and iris cut by a too flexible knife; rather free bleeding; much soft cortex; pupil left nearly black	Favorable. Some capsular membrane in lower part of pupil	Feb. 19th—Needled. March 19th—Needled; two needles used to make a fair gap	Sept.—+11 D. = $\frac{3}{9}$. +16 D. = 1 J.
37	37	A. B. Jan. 31st	M.	63	„	Left; extraction upwards with iridectomy. Right had been extracted in 1893, and sees $\frac{6}{12}$ partly and 1 J. well	Some membrane formed an increasing impediment to vision	June 28th—Needled; one needle	July 3rd—+12 D. = $\frac{2}{60}$. +18 D. = 16 J. Slight choroidal-retinal change in y. s. region.
12	38	M. S. Feb. 19th	F.	76	„	Right; extraction up with iridectomy; iridectomy impeded by patient squeezing lids; large hard lens came out reluctantly. Patient subject of glycosuria, averaging about 20 gr. of sugar to the ounce	Iris got drawn back to some membrane below. Patient subject of senile dementia. After needling gave much trouble by getting out of bed, &c.	May 7th—Iridectomy down to free synechia. Patient squeezed lids violently, and proposed needling was not attempted	May 17th—Eye quiet, but still membrane in pupil. +10 D., counts fingers at 10″.
18	39	C. B. March 5th	M.	73	„	Left; extraction upwards with iridectomy; some soft cortex; nucleus of lens hard; pupil left nearly black	Pupil did not dilate well to atropine	None	April 26th—$\frac{+11\text{ Ds.}}{+1\text{ Dc.}} = \frac{6}{36}$. +16 D., spells 10 J.
23	40	G. B. May 28th	M.	64	Chloroform	Right. Preliminary iridectomy had been done elsewhere, when left was extracted, and subsequently shrank. After incision with Graefe, lens found to be dislocated and movable; removed fairly satisfactorily with spoon after opening capsule; a little vitreous was lost	A small bead of vitreous showed at wound; it eventually flattened down	None	Quite illiterate. Eye looks well, and patient very satisfied with his sight. Chooses +11 D. and can see there is such a line as 6 Snellen at 6 m.

Page in Bk. '94	Report No.	Name and date.	Sex.	Age.	Anæsthetic.	Operation.	Progress of case.	Secondary operation	Result.
2	41	C. S. June 9th	M.	43	Cocain	Left; extraction upwards with iridectomy; incision a little irregular as knife became entangled in iris; rather free bleeding	Pupil did not dilate below, iris being here drawn back to membrane	None	Sept., 1894— +11 D. = $\frac{6}{9}$, $\frac{6}{6}$ one or two. +16 D. = 1 J.
43	42	E. M. July 12th	F.	75	„	Left; extraction upwards with iridectomy; incision rather short and counter-puncture a little too near corneal margin. Cystitome twice used to open capsule, and also to draw a hard and large lens through incision when it presented	Aluminium shield used to apply dressing, and its coolness and comfort much appreciated by patient	Sept. 13th— Needled; one needle; good transverse gap made in membrane	Sept. 22nd— +10 D. = $\frac{6}{18}$. +15 D. = 2 J. with difficulty.
42	43	A. S. July 18th	F.	30	„	Right; corneal incision very near upper corneal margin; no iridectomy; lens rather soft and sticky, came away with difficulty; some left behind; pupil central after reposition of iris. Patient's mother, grandmother, and great grandmother, all on mother's side, had cataracts at early age, and in each case the cataract appeared earlier than in the preceding one. Left had been extracted 1890, and after a needling sees $\frac{6}{6}$ fully	Iris became incarcerated in wound, apparently being pushed there by swelling of some remaining lens matter behind it	July 31st— Anterior synechia freed by iridectomy. Sept. 17th— With Knapp's needle a posterior synechia freed, and good gap made in membrane	Sept. 22nd— +13 D. = $\frac{6}{6}$ partly. +16 D. = 1 J.
49	44	A. S. Sept. 13th	M.	40	„	Right; extraction upwards with iridectomy. On using cystitome capsule tough, and suspensory ligament weak and loose, allowing lens to move. Lens removed with spoon without loss of vitreous. Has had old iritis and hyalitis; posterior synechiæ; myopia 6 or 7 D.	Pupil became updrawn; progress fairly satisfactory	Apr. 25th, '95— Iridectomy down for artificial pupil	Oct. 24th— +7 D. = $\frac{6}{60}$. +12 D. = 16 J. In April, 1895, vision further reduced after updrawing of pupil. After iridectomy, May 10th, 1895— +7 D. = $\frac{6}{60}$. +12 D. = 14 J.

	48	45	C. D. Sept. 13th	F.	57	Cocain	Left; extraction upwards with iridectomy; counter-puncture of section at sclero-corneal junction; middle of section entirely corneal; much soft matter coaxed out after a hard nucleus	Slow in quieting; membrane in pupil adherent at inner end of scar	Jan. 10th, 1895—Membrane in lower part divided with cutting needle	Jan. 14th, 1895— +12·5 D.=$\frac{6}{12}$; $\frac{6}{9}$ 2 letters. +18 D.=1 J. well.
	51	46	S. P. Sept. 17th	F.	69	„	Right; extraction upwards without iridectomy; lens ruptured a few fibres at pupillary edge of iris; iris easily returned, but pupil did not become quite circular or central under eserine twice used before eye tied up; left had been extracted without iridectomy in July, 1891	Good deal of pain for some hours; large prolapse of iris next morning; bleeding into a. c. on removal of prolapse	Sept. 18th—Prolapse of iris removed; solid cocain used	Dec. 20th— +12 D.=$\frac{6}{24}$ +16 D.=1 J. well. Tested in bad light.
	55	47	M. M. Sept. 28th	F.	56	„	Right; extraction upwards with iridectomy; capsule not freely opened at first; cystitome twice used	Favorable	None	Nov. 1st— +12 D.=$\frac{6}{36}$. +16 D.=10 J.
	56	48	H. W. Sept. 28th	F.	75	„	Right; extraction upwards attempted without iridectomy, but lens would not present till a small iridectomy had been made and capsule more freely opened with cystitome; lens sticky	A. c. very slowly re-formed; patient had a cough; some posterior synechiæ rendered pupil festooned	None	Oct. 16th— +14 D.=$\frac{6}{36}$. +16 D.=6 J.
	62	49	J. M. Oct. 8th	M.	63	„	Right; extraction upwards with iridectomy; section nearly at sclero-corneal junction; vitreous presented, but none escaped	Favorable; some bleeding into a. c. on 4th day	None	Oct. 22nd— +11 D. counts fingers at 6 m.
	67	50	S. W. Oct. 29th	M.	69	„	Left; extraction upwards with iridectomy; some soft cortex left; right is myopic; ? left	Oct. 30th—Has been very restless, and got out of bed this evening. Nov. 1st—Chemosis; cornea very hazy; pupil scarcely visible; small prolapse of iris at nasal end of wound. T.+	Nov. 19th—Left excised; cornea suppurated and sloughed	An unhealthy patient with complete absence of self-control.

Page in Bk. '94.	Repo No.	Name and date.	Sex.	Age.	Anæsthetic.	Operation.	Progress of case.	Secondary operation	Result.
69	51	J. V. Nov. 8	M.	69	Cocain	Left; extraction upwards with iridectomy; iris caught on point of Graefe near counter-puncture; not divided; cystitome twice introduced; lens then easily extruded, and pupil left nearly black	Some striped keratitis; eye knocked at end of a week; good deal of bleeding into a. c.	None	Feb. 25th, 1895— +12 D. = $\frac{6}{12}$. +16 D. = 1 J.
71	52	L. H. Nov. 12th	F.	59	„	Right; extraction upwards with iridectomy; troublesome bleeding from short conjunctival flap; capsule tough; an opaque piece of its anterior portion occupied pupil at close of operation	Favorable; opaque portion of capsule seems to be shrinking	May 18th, '95— Right needled	May 21st, 1895— + 7 D. = $\frac{6}{12}$, 1 letter. +12 D. = 1 J. well.
70	53	C. G. Nov. 23rd	M.	76	„	Right; extraction upwards with iridectomy; rather peripheral incision; lens large; much bleeding into a. c.; cornea flaccid. Operation done in bed. Patient has large ulcer of leg	A few posterior synechiæ; silver nitrate used for conjunctival discharge; aluminium shield to retain dressing on 3rd day	None	Dec. 12th— + 9 D. = $\frac{6}{24}$, 1 letter. +13 D., words of 10 J. By artificial light.
77	54	H. T. Dec. 6th	F.	44	„	Left; extraction upwards with iridectomy; small hard nucleus to lens; cortex milky; pupil left nearly black	Favorable	No ne	Jan. 8th, 1895— +11 D. = $\frac{6}{18}$; counts letters of $\frac{6}{12}$, but is uneducated. +16 D. names all letters of 1 J. successively with ease.
77	55	H. T. Dec. 27th	F.	44	„	Right; extraction upwards with iridectomy; central part of incision corneal; lens sticky	Slight entanglement of iris at temporal end of wound	None	Jan. 14th, 1895— +11 D. = $\frac{6}{24}$. +16 D.; names letters of 10 J.

TABLE II.—*Soft Cataracts. Mr. Nettleship's Cases* (12).

136	56	E. B. Jan. 26th	F.	14	Cocain	Left; curette extraction of lamellar cataract after needling, Jan. 5th, 1894	Favorable	Dec. 14th—Final needling	Dec. 20th—+9 D. = $\frac{6}{24}$. +13 D. = 1 J. words slowly.
10	57	R. S. Mar. 2nd	M.	14	Ether	Right; curette extraction of cataract needled Jan. 12th and Jan. 19th; much mental deficiency; lamellar	Favorable	None	April 13th—+10 D. = $\frac{6}{36}$.
43	58	J. S. Apr. 17th	M.	49	,,	Left; extraction upwards with iridectomy of a lens, swollen soft and opaque, 3 weeks after wound of globe with a thorn in hedging; eye painful from some iritis	Slight iritis persisted; good deal of soft blood-stained lens matter remained; iris drawn back below	None	Went down to the country May 2nd; not seen since.
52	59	F. K. Apr. 20th	F.	4	,,	Right; needled; two needles; good gap made in remains of a lens the subject of lamellar cataract previously needled May 13th, 1892	Favorable	None	July 5th—Refraction estimated +12 D.; subjective tests not possible.
52	60	F. K. Apr. 27th	F.	4	,,	Left; needled, one needle; incision with cutting broad needle to inner side of cornea; tough membrane pulled out with iridectomy forceps; remains of lamellar previously needled May 20th, 1893	Some iritis; pupillary edge of iris drawn back; periphery bulged; T. n.	June 15th—Ether; iridectomy done outwards; did well	+12 D. ordered by estimation.
65	61	E. M. June 8th	M.	7	Cocain	Left; iridectomy for adherent leucoma done May 18th, 1894; traumatic cataract; wound 4 years before. Incision in cornea down and out with bent broad needle; remains of lens seized with cross-action forceps, but only part could be removed; a little vitreous lost	Did well	None	No improvement in vision, which is merely perception of light.

Page in Bk. '94.	Report No.	Name and date.	Sex.	Age.	Anæsthetic.	Operation.	Progress of case.	Secondary operation.	Result.
133	62	W. L. June	M.	7 m.	Chloroform	Congenital cataract; white nuclear opacity with well-defined border, and a denser opacity at posterior surface of lens; needled as an out-patient	Lens did not absorb	Dec. 7th—Chloroform; needled, one needle; iris thick and vascular, began to bleed; lens and capsule tough; operation given up	—
107	63	A. B. Aug. 7th	F.	4	Ether	Right needled freely; dense double lamellar cataract in each	Absorption slow	April, '95—Needled again	Unfinished.
105	64	G. H. Aug. 13th	M.	11	„	Left; curette extraction after needling of lamellar cataract, Aug. 7th; some soft lens matter left	Favorable, but tension kept slightly above normal	Sept. 24th—Ether; further curette evacuation of lens matter	Feb. 5th, 1895—+12 D. = $\frac{6}{9}$; several of $\frac{6}{6}$. +15 D. = 1 J. at 10″.
121	65	L. S. Nov. 16th	F.	10	Cocain	Right; needled; one needle. Final operation on lamellar; lens matter brittle and not easily broken; a few small pieces escaped through needle puncture; previous 3 needlings of right in 1893	Favorable	None	Nov. 27th—+11 D. = $\frac{6}{24}$.
130	66	E. P. Nov. 30th	F.	19	„	Final needling of right lamellar; one cutting needle used	Favorable	None	Dec. 9th—+ 9 D. = $\frac{6}{24}$. +14 D. = words of 1 J.
130	67	E. P. Nov. 30th	F.	19	„	Final needling of left lamellar; one cutting needle used	Favorable	None	Dec. 9th—+10 D. = $\frac{6}{36}$. +14 D. = words of 1 J.

9	68	C. D. Jan. 31st	M.	12	Cocain	Right; curette extraction of lens, freely needled two days before. T. + 2 before operation; cornea steamy. Severe pain and vomiting. Paracentesis of a. c. performed the night before to relieve symptoms, after leeching had been tried. Lamellar type of cataract	Favorable	July 5th—Right needled; one needle	Sept. 10th—+15 D. = $\frac{6}{12}$ fully, $\frac{6}{9}$ partly. +19 D. = 1 J. very fairly.
14	69	A. W. M. March 1st	M.	16 m.	Chloroform	Right; lens matter removed with syringe, after needling of congenital cataract on Feb. 22nd	Favorable	None	March 12th—Nearly clear space in centre of pupil.
14	70	A. W. M. March 19th	M.	17 m.	,,	Left; suction evacuation of lens matter after needling of congenital cataract March 12th. A bead of vitreous presented on making section with keratome near outer corneal edge, and a little escaped on using the syringe	Favorable	None	March 29th—Eye quiet; a little opaque material in pupil.
29	71	E. P. June 20th	M.	29	Cocain	Right; curette extraction of soft cataract, which did not come freely through keratome incision in outer part of cornea. Needling June 18th, followed by T. + 2, and pain, relieved by leeching. No general symptoms. Cataract described as posterior capsular and cortical; most dense at posterior pole and close to equator	Favorable	Aug. 23rd—Needled; one needle	Oct. 4th, 1894—+10 D. = $\frac{6}{15}$. +15 D. = 12 J.
59	72	J. P. Oct. 11th	M.	7½	Ether	Right; suction extraction of a lens the subject of lamellar cataract, which had been needled Oct. 4th. A small bead of vitreous protruded at keratome incision and was cut off	Favorable	None	Clear central space in pupil.

Page in Bk. '94.	Report No.	Name and date.	Sex.	Age.	Anæsthetic.	Operation.	Progress of case.	Secondary operation.	Result.
9	73	C. D. Oct. 18th	M.	12	Cocain	Left; curette evacuation. Tension rose after needling freely Oct. 15th, but no general symptoms. Lens matter came away easily; a bead of vitreous presented and was cut off. Lamellar cataract	Favorable	None	Feb. 15th, 1895— + 15 D. = $\frac{6}{18}$.
74	74	F. S. Nov. 22nd	M.	4	Ether	Right; curette evacuation of some lens matter of a soft bulging concussion cataract; by use of suction syringe a further quantity was removed. Capsule of lens ruptured after blow with blunt stick 7 weeks before admission; no evidence of corneal perforation	Favorable	None	Nov. 29th— Very little lens matter in pupil; small central aperture.
79	75	C. K. Dec. 10th	M.	12	„	Right; extra-ocular iridotomy; incision at corneal margin with keratome; gap in iris made down and in; some difficulty in reposition of iris. For a very small lamellar cataract, with a wide margin of clear lens	Did well, but iris became adherent to corneal scar by its inner cut edge	Dec. 27th— Ether. Anterior synechia freed with Lang's knives	Jan. 18th, 1895— R. $\frac{6}{24}$, $\frac{6}{18}$ partly; not improved by lenses, 1 J. Before operation, R. $\frac{6}{36}$, $\frac{6}{24}$ partly. Says right eye is the better of the two. Similar cataract in left.
80	76	W. C. Dec. 13th	M.	30	Cocain	Right; partial curette evacuation of traumatic cataract, bulging into anterior chamber. Injured by a bramble thorn 17 days before operation	Favorable; a good deal of lens matter left to absorb	None	Dec. 29th—Went down to country and not seen again after.

REPORT

OF THE

DEPARTMENT FOR DISEASES OF THE SKIN, 1894.

By H. H. HAWARD,
CLINICAL ASSISTANT.

During the year 1894 there were treated in the Skin Department 682 patients, of whom 356 were males and 326 females. These presented 746 separate forms of skin disease. The males were responsible for 402 of these, and the females for 344.

Last year 627 cases were tabulated, 317 males and 310 females.

The form of the statistical table has been slightly altered, as it was not thought to be of any practical value to know how many males and females there were in each month. However, on looking over the records a somewhat remarkable fact has been noted and deserves to be recorded. It relates to the 86 cases of psoriasis. During the winter months from October to March inclusive there were 37 cases, of which 20 were males and only 17 females; whereas during the summer months, April to September inclusive, there were 49 cases, but only 18 of these were males and 31 females. There is no similar irregularity in the records for any of the other diseases, except a quite insignificant difference in those of eczema which may be explicable by

the fact that a few of the unemployed find their way to the hospital who would be busy in the summer. I have examined the reports for the previous four years at this hospital, and find no similar indication. The total of the four years gives the following result:—241 cases, 81 male and 160 female; of these during winter 42 male and 79 female, and during summer 39 male and 81 female. The result for this year is therefore only a coincidence, and serves to emphasize the uselessness of statistics based on a limited number of cases.

The manner of classification of the different diseases has been somewhat altered, and a complete statistical table of the ages of the patients with the several diseases has been included.

The following remarks on the most interesting cases of the year may be added.

1. *Melanoderma.*—Fred W—, æt. 27, was seen on June 15th, 1894, presenting brownish-yellow patches on the backs of the hands and arms, and also on penis and scrotum.

The history was that they were gradually increasing, having commenced as small spots. They itched when the patient got hot, and he said they got darker when he washed, but this was probably only by contrast.

2. *Pityriasis rosea.*—This patient was also the subject of pityriasis rosea on chest and upper part of abdomen, appearing every year, and for which he came for treatment and was not seen again, Lotio Hydrargyri Perchloridi gr. iv ad ℥j being apparently very effectual.

The other cases of pityriasis rosea are also of interest. James K—, æt. 26, had had the eruption for sixteen days. It was extensive over the back, trunk, and limbs, some points only commencing, others as much as one inch in diameter and running into each other. These were yellowish in the centre and bright red at the spreading margin, but without any of the greasy aspect of seborrhœa corporis. He had the same treatment as the previous case, and likewise did not appear again. In both there was a rheumatic history.

The third case was that of William H—, æt. 22. He was seen on September 28th, 1894, and gave the history that the rash had appeared three weeks ago on the right

leg and a week later on trunk and arms. He also said he had a similar rash eight years ago, which lasted for eighteen months. He was cured in a month with Unguentum Petrolei Co., and alkalies internally.

3. *Tinea circinata.*—In contrast with these we may compare a case of probable tinea circinata in which the diagnosis was of some difficulty. Edgar R—, æt. 10, was covered all over the trunk, both in front and behind, and over both legs and arms, with a circinate rash, which specially localised itself to the groins and the middle line behind, particularly between the buttocks. The thighs also were fairly well covered. The rings varied in size, but were mostly large, and many were over an inch in diameter, some as much as an inch and a half. The whole of each patch was of a bright red colour, obscured at the margin by a ring of fine white scales. This ring was a good deal raised above the level of the surrounding skin, both inside and outside it. The largest of the rings were many of them becoming broken up and incomplete. It was said to have commenced in the neck a few weeks previously, and to have spread downwards. There was no patch to be found on the scalp, and no history of contagion was discoverable. On microscopic examination of the scales no fungus was seen. The diagnosis was, however, supported by the resistance of the disease to treatment, for it was not completely cured till four months later.

In six other cases of tinea circinata no lesion could be found on the scalp. The ages of these were 4, 6, 12, 23, 35, and 39 years respectively.

4. *Kerion.*—Four cases of this disease were noted as being associated with tinea tonsurans, one of which was upon the forehead. None of these gave any trouble in treatment, but were cured rapidly. In two of the cases herpetic eruption is noted to have occurred on the lower lip simultaneously with the other disease.

5. *Xanthelasma.*—Louisa H—, æt. 53, appeared on July 27th, exhibiting yellowish-brown raised patches and papules on the chest and abdomen. These caused considerable irritation, and had begun to appear six months previously. They were not red or inflamed in any way. The skin over

them was greasy and slightly scaly. The urine was normal, and there were no symptoms of other disease.

6. *Keratosis pilaris.*—James F—, æt. 7, complained of an eruption on neck, shoulders, back, and outer side of thighs, which had existed for three weeks previous to March 16th, when he was the subject of examination. The follicles were seen to be distended with an accumulation which was protruding from their mouths; and especially in front of the right shoulder these formed what looked like minute horny growths. Around some of the papular projections was a little inflammation. There was no itching.

Fred L—, æt. 8, presented a somewhat similar but less marked condition on November 9th, which he had had for one month on chest, abdomen, arms, thighs, and scalp. He complained of itching.

Daisy S—, æt. 6, was the subject of a typical leprous psoriasis of the knees and elbows, for which she required treatment on May 11th; but in addition it was noticed that the posterior surface of the left shoulder and arm was rough with reddish papules, from the surface of which small spikes were protruding.

7. *Acne atrophica.*—Two patients, both females, were seen during the year with this disease in its typical severe diffuse form. Over the shoulders, chest, and back were seen the deep cicatricial spots scattered in profusion. In neither was there, however, any history of gout or rheumatism.

8. *Dermatitis herpetiformis.*—A large number of cases of this disease have been seen lately, which may perhaps be better recognised by some people under its synonyms dysidrosis, cheiropompholyx. Perhaps the most interesting of all is that of Charlotte H—, æt. 27, who has attended every summer for the last six years with a precisely similar condition of the hands. The disease always commences in the left hand on its ulnar border, and very soon after attacks the right in the same way. When complete the disease is chiefly confined to the ulnar half of the hand and fingers and lower half of the forearm, which parts are covered with bullæ. These break or are pricked and a crust forms, and the hands return to their normal state

again under treatment in about a month. She says she had it once when she was six years old, and her palms always perspire a great deal. There is much itching during its course.

With this may be compared the case of Arthur H—, æt. 17, who every winter all his life has had a similar condition on both hands and feet, with much irritation and rather more inflammation. This also attacks the ulnar sides of the hands. His cure only takes a week or so.

In the case of Agnes L—, æt. 14, the disease commences on the arms and spreads downwards, and with it there is a great deal of swelling of the parts and much general disturbance, with malaise and giddiness, but no fever and no itching.

In this case the backs of the hands and forearms are the chief seats of the disease, and presented two weeks after the commencement of the disorder raw discharging patches with surrounding vesicles. She also gets cured in about a week.

Mary S—, æt. 24, and Mary L—, æt. 44. Both appeared on June 29th, and in each there was a possibility of its being due to the occupation. In the former it was on the hands and arms, and had occurred two years before and resisted treatment for two and a half months. In the latter it was on the fingers chiefly, and was cured at once. Both had existed for a week only, and caused much burning and itching.

9. *Lupus psoriasis.*—Two cases of this disease may be mentioned which presented much similarity. Their chief interest lies in their diagnosis from psoriasis lepra. The history of the existence of the patches for a continuous period of two or three years, and their progressive slow enlargement during that period, first aroused suspicion. In both cases the appearance alone would certainly have misled any but the most experienced. It was only under very close observation that it was discovered that there was slight destruction of skin and cicatrisation superficially, and that some patches had a rather tubercular margin. There was very little thickening or inflammation about the patches, some of which were covered with a firm white adherent crust ;

some were of a dull red colour, and scaly like a healing psoriasis.

Henry H—, æt. 12, was seen first on October 12th, and showed a patch, one and three quarter inches in diameter over the left olecranon, besides others on the arms, back, chest, thighs, and loins. He was also the subject of congenital ichthyosis.

Gerald P—, æt. 13, was affected on the right olecranon to almost a similar extent, and had two other patches, one inch in diameter, over the outer and anterior aspect of the upper part of the thigh. The patients and their mothers are now the only obstacle to the surgical removal of the patches.

10. *Adenoma sebaceum.*—A patient presenting this rare form of disease has lately attended. He came from the country, and, though completely deaf in one ear, his intellectual capacity was quite up to the standard. The history he gave was that the spots began as early as he could remember, and had been getting larger and more numerous all his life. He had a ruddy complexion, and scattered over his cheeks, nose, and chin were numerous discrete, sessile projections of the colour of raw ham, and varying in size from a No. 8 to a No. 4 shot. These were most numerous at the junction of the nose with the cheek and along the naso-oral fold, but were also very frequent over the chin. He was very conscious of their great disfigurement, and readily assented to the proposal for removing them. He was admitted to the hospital for that purpose, and as the result his spots are gone, and the naturally full-moon-like face of the countryman has been made to appear more intelligent by narrowing the cheeks and deepening the zygomatic grooves.

11. *Alopecia universalis.*—A young man has been attending regularly who had not a hair to be found upon his body, and no cause could be ascertained. The misery of his condition caused him to be a willing subject of experiment, and numerous remedies were tried without avail, including the thyroid extract when the fashion for the use of that remedy arose. Though this seemed to cause increased circulation in the scalp and brain, no hair ever appeared. Latterly he has been taking pilocarpine, and as a result he can now

boast of a fair amount of covering on head, face, and body. Curiously enough, the pubic hair was the first to appear, that on the cheeks coming a few weeks later, and last of all on the scalp. The growth now is getting coarser in character, and does not fall out till it gets to a fair length. What the final result will be when he leaves off the drug remains to be seen.

TABLE I.—*Statistics in relation to Season and Sex.*

			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals. Males.	Females.	Both sexes
A. General Skin Inflammations.																	
I. *Acute Symptomatic*		Varicella	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1
II. *Indefinite diffuse.*																	
1. Hyperæmic		Erythema simplex	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1
		„ pernio	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1
		„ intertrigo	...	...	...	...	...	...	...	...	1	...	...	...	...	1	1
		„ rosaceum	...	...	...	1	...	1	3	...	...	3	1	...	5	4	9
2. Exudative	*α.* Erythematous	„ papulatum	...	...	...	1	...	...	...	...	...	...	1	...	1	1	2
		„ circinatum	...	1	...	...	...	1	1	...	...	...	...	...	2	1	3
		„ multiforme	...	...	...	...	1	...	1	...	...	1	...	...	1	2	3
	β. Œdematous	Urticaria	4	...	1	3	2	4	4	4	...	5	1	1	14	15	29
	γ. Vesicular	Herpes zoster	1	1	...	...	1	1	...	1	...	1	3	1	10	...	10
		„ gestationis	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1
		Dermatitis herpetiformis	...	...	...	...	...	3	...	1	...	1	...	1	1	5	6
		Pemphigus	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1
	δ. Pyogenic	Impetigo contagiosa	...	...	1	1	...	1	5	6	1	...	2	4	18	3	21
		Eczema, unclassed	2	7	7	14	2	8	5	12	6	3	5	6	42	35	77
		„ pustulosum	2	...	4	...	3	2	...	1	...	1	2	5	11	9	20
		„ siccum	1	...	1	3	1	2	1	1	1	...	...	...	5	6	11
		„ erythematosum	...	...	...	...	...	1	...	...	...	2	...	1	1	3	4
		„ papulosum	1	...	1	...	2	...	...	...	...	...	...	...	2	2	4
		„ vesiculosum	1	1	...	...	1	...	...	...	...	2	1	...	4	2	6
		„ circumscriptum	...	...	...	...	...	...	...	...	...	1	1	...	...	2	2
		„ varicosum	...	...	...	2	...	1	1	1	1	...	...	...	4	2	6
		„ seborrhœicum	...	1	...	...	...	1	...	...	...	...	1	1	1	3	4
		„ follicularum	...	...	2	...	...	1	...	1	...	3	...	...	6	1	7
		„ pilare	...	1	...	...	...	...	...	...	...	...	...	...	1	...	1
		„ marginatum	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1
		„ universale	...	...	...	...	...	...	...	...	...	1	...	...	1	...	1

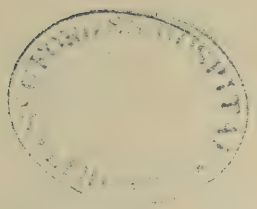
		ε. General	„ acutum	...	...	1	...	...	...	...	...	...	...	1	...	...	1	1	2
			„ chronicum	...	...	...	2	1	...	1	...	...	1	...	...	...	3	2	5
			„ psoriasis	1	1	...	1	...	...	...	1	...	...	...	...	...	1	3	4
			„ capitis	1	...	1	...	...	...	2	2	1	1	...	2	4	6	10
			„ faciei	1	1	...	...	2	2	...	...	...	1	...	...	5	2	7
			„ aurium	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1
			„ nasi	...	1	...	...	...	...	...	...	...	...	...	...	1	...	1
			„ abdominis	1	...	...	...	...	...	1	...	...	...	...	...	2	...	2
			„ crurum	...	...	...	...	1	...	1	...	...	1	...	1	1	3	4
			„ plantare vel palmare	1	1	1	2	...	1	1	...	2	2	2	1	3	11	14
			„ ani	...	...	1	...	...	...	...	1	...	...	...	...	...	2	2
			„ herniæ	...	...	...	1	...	...	...	...	...	...	...	...	1	...	1
			„ barbæ	...	1	...	...	...	1	1	1	...	1	...	...	5	...	5
			„ rosaceum	...	1	...	...	...	...	...	...	...	...	...	...	1	...	1
3. Hyperplastic		α. Desquamative	Psoriasis	8	3	2	7	11	9	8	9	5	8	8	8	38	48	86
			Pityriasis rosea	...	1	...	...	...	1	...	...	1	...	...	...	3	...	3
		β. Papular	Lichen planus	1	1	1	1	...	1	...	...	...	...	...	...	1	4	5
			„ ruber et planus	...	...	...	...	...	...	...	1	1	...	...	...	...	2	2
4. Granulomatous		α. Tubercular	Lupus nasi	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1
			„ psoriasis	...	...	...	...	...	...	...	...	...	1	...	...	1	...	1
			Tubercular abscess	...	...	...	1	...	...	...	...	...	...	...	...	1	...	1
		β. Dermato-syphilis	Congenital	...	...	...	...	...	...	...	...	1	...	1	2	2	2	4
			Primary	...	...	...	...	...	...	...	...	...	1	...	...	1	...	1
			Secondary	1	1	...	2	1	1	...	...	...	2	...	1	5	4	9
			Tertiary	1	...	2	1	2	3	3	3	1	4	1	3	12	12	24
B. Localised Disorders.																						
I. *Sebaceous Glands*			Frontal comedones	...	...	...	...	1	2	...	...	1	...	2	...	3	3	6
			Seborrhœa corporis	3	...	1	...	...	...	2	2	...	1	1	...	6	4	10
			„ sicca	1	...	2	1	2	...	1	2	...	1	2	...	3	9	12
			Acne vulgaris	3	...	...	1	3	1	2	1	1	1	...	1	11	3	14
			„ rosacea	1	2	...	1	...	3	...	...	...	...	...	...	...	7	7
			„ atrophica	...	...	...	1	...	...	...	...	...	...	1	...	...	2	2
			Keratosis pilaris	...	...	1	...	1	...	...	...	...	...	...	...	1	1	2
II. *Hair-follicles*			Alopecia universalis	1	...	...	1	...	1	...	...	...	2	1	1	2	5	7
			„ pityrodes	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1
			„ areata	5	5	3	6	4	6	2	7	2	2	4	2	26	22	48
			Sycosis	...	...	...	...	1	...	...	1	...	...	...	...	2	...	2
			Folliculitis	1	1	...	...	1	...	...	...	...	1	...	...	3	1	4
			Furunculi	...	1	2	...	...	...	...	...	...	1	1	...	5	...	5

			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals. Males.	Females.	Both sexes.
B. Localised Disorders—*continued.*																	
III. *Sweat-glands*		Bromidrosis	...	1	...	...	...	...	...	...	...	...	...	...	1	...	1
IV. *Pigment-cells*		Melanoderma	...	...	...	...	...	1	...	...	...	...	...	...	1	...	1
V. *Nails*		Eczema unguium	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1
		Psoriasis unguium	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1
C. Hæmorrhagicæ		Purpuræ	...	...	1	...	...	...	...	...	1	...	...	...	2	...	2
D. Neoplasmata		Verrucæ	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1
		Molluscum fibrosum	...	...	...	...	1	...	...	...	...	...	...	...	1	...	1
		„ contagiosum	...	...	...	...	1	...	...	...	...	...	...	...	1	...	1
		Keloid	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1
		Xanthelasma	...	...	...	...	...	...	1	...	...	...	...	...	...	1	1
		Rodent ulcer	...	...	...	...	1	...	...	...	...	...	1	...	2	...	2
E. Neurosis		Pruritus	1	...	...	...	...	...	1	...	...	...	...	...	2	...	2
F. Parasiticæ	*α.* Vegetable	Tinea tonsurans	3	4	8	4	16	4	1	11	5	3	4	4	36	31	67
		„ circinata	...	2	1	1	...	1	3	1	2	1	2	...	9	5	14
		„ versicolor	...	...	1	1	...	1	1	...	2	1	...	...	3	4	7
		Kerion	...	...	1	...	1	...	...	...	1	...	1	...	3	1	4
	β. Animal	Scabies	3	4	...	6	3	2	7	3	2	2	2	10	24	20	44
		Pediculi corporis	6	3	...	1	...	...	1	1	1	4	4	3	18	6	24
		„ capitis	2	3	3	...	...	1	...	2	...	...	1	1	3	10	13
G. Malformations		Ichthyosis	2	...	2	2	...	...	1	1	...	1	...	...	7	2	9

TABLE II.—*Statistics in relation to Age.*

	Under 3.	3–5.	5–10.	10–15.	15–20.	20–25.	25–30.	30–35.	35–40.	40–45.	45–50.	50–55.	55–60.	60–65.	65–70.	70–75.	Total.
Varicella	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Erythema simplex	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
„ pernio	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
„ intertrigo	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
„ rosaceum	...	...	...	...	1	...	1	1	...	2	4	...	...	...	...	...	9
„ papulatum	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2
„ circinatum	1	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	3
„ multiforme	...	...	...	1	...	2	...	...	...	...	...	...	...	...	...	...	3
Urticaria	6	1	1	3	2	4	2	2	4	2	1	...	...	...	1	...	29
Herpes zoster	...	2	1	2	3	...	1	...	1	...	...	...	...	...	...	...	10
„ gestationis	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Dermatitis herpetiformis	...	...	...	...	...	2	1	1	...	1	...	1	...	...	...	...	6
Pemphigus	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
Impetigo contagiosa	2	1	5	7	5	1	...	...	...	...	...	...	...	...	...	...	21
Eczema, unclassed	18	4	4	5	3	6	5	2	5	4	4	3	5	3	5	1	77
„ pustulosum	8	3	...	2	2	1	1	...	1	2	...	...	...	...	...	...	20
„ siccum	...	1	...	2	1	1	...	...	...	2	1	3	...	...	...	...	11
„ erythematosum	...	...	...	...	...	...	...	...	...	3	1	...	...	...	...	...	4
„ papulosum	1	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	4
„ vesiculosum	1	...	...	...	...	1	...	...	...	2	...	...	...	1	...	1	6
„ circumscriptum	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2
„ varicosum	...	...	...	...	...	...	...	...	2	...	...	...	...	1	2	1	6
„ seborrhœicum	...	...	1	1	...	...	...	...	1	...	1	...	...	...	...	...	4
„ follicularum	...	...	...	1	...	1	2	1	1	...	...	1	...	...	...	...	7
„ pilare	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
„ marginatum	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
„ universale	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
„ acutum	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2
„ chronicum	...	...	...	2	1	...	...	...	...	...	1	...	...	1	...	...	5
„ psoriasis	...	...	...	...	1	...	...	...	...	2	1	...	...	...	...	...	4
„ capitis	4	2	2	...	...	...	...	...	...	1	...	...	...	1	...	...	10
„ faciei	...	1	...	1	2	2	...	...	...	...	...	...	...	...	...	1	7
„ aurium	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
„ nasi	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
„ abdominis	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2
„ crurum	...	...	...	1	...	...	1	...	...	1	...	...	...	...	...	1	4
„ plantare vel palmare	1	...	1	1	2	1	1	2	2	...	1	2	...	...	...	...	14
„ ani	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
„ herniæ	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
„ barbæ	...	...	...	...	...	3	1	...	...	...	...	1	...	...	...	...	5
„ rosaceum	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
Total of all varieties of eczema	35	11	8	17	13	18	12	9	15	17	11	10	7	7	8	5	203

	Under 3.	3–5.	5–10.	10–15.	15–20.	20–25.	25–30.	30–35.	35–40.	40–45.	45–50.	50–55.	55–60.	60–65.	65–70.	70–75.	Total.
Psoriasis	1	2	11	16	8	11	6	4	1	6	9	5	4	2	...	...	86
Pityriasis rosea	...	...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	3
Lichen planus	...	...	...	...	1	...	1	...	1	...	1	...	...	...	...	1	5
„ ruber et planus	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	2
Lupus nasi	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
„ psoriasis	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
Tubercular abscess	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
Dermato-syphilis, congenital	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
„ primary	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
„ secondary	...	...	...	...	...	2	3	1	1	2	...	...	...	...	...	...	9
„ tertiary	...	..	...	...	...	1	4	3	6	1	4	3	2	...	...	...	24
Frontal comedones	...	...	...	1	3	1	...	1	...	...	...	...	...	...	...	...	6
Seborrhœa corporis	...	...	...	2	2	4	1	...	...	...	...	1	...	...	...	...	10
„ sicca	..	...	...	1	4	4	2	...	...	...	1	...	...	...	...	...	12
Acne vulgaris	...	...	...	2	8	2	1	...	...	1	...	...	...	...	...	...	14
„ rosacea	...	...	...	...	...	...	1	2	1	1	1	...	...	1	...	...	7
„ atrophica	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	2
Keratosis pilaris	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Alopecia universalis	...	...	...	1	1	1	2	...	...	1	...	...	...	...	1	...	7
„ pityrodes	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
„ areata	1	1	11	9	6	7	5	2	...	4	1	1	...	...	...	...	48
Sycosis	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	2
Folliculitis	...	...	...	1	1	...	...	1	...	1	...	...	...	...	...	...	4
Furunculi	...	...	...	1	1	...	1	...	...	...	...	...	...	1	...	1	5
Bromidrosis	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Melanoderma	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Eczema unguium	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Psoriasis unguium	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Purpuræ	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	2
Verrucæ	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Molluscum fibrosum	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
„ contagiosum	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Keloid	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
Xanthelasma	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
Rodent ulcer	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2
Pruritus	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	2
Tinea tonsurans	9	11	37	8	1	...	1	...	...	...	...	...	...	...	...	...	67
„ circinata	...	2	6	2	1	1	...	1	1	...	...	...	...	...	...	...	14
„ versicolor	...	...	1	...	...	...	3	...	2	1	...	...	...	...	...	...	7
Kerion	...	1	1	...	1	1	...	...	...	...	...	...	...	...	...	...	4
Scabies	3	4	9	6	6	3	8	2	1	...	1	...	...	1	...	...	44
Pediculi corporis	...	...	...	...	1	1	2	...	5	1	1	1	5	3	3	1	24
„ capitis	...	2	5	3	1	...	...	1	...	...	1	...	...	...	...	...	13
Ichthyosis	2	...	1	3	2	...	...	...	1	...	...	...	...	...	...	...	9
	65	38	99	90	75	72	68	31	44	41	40	25	18	16	16	8	746



STATISTICS

OF THE

THROAT DEPARTMENT OF ST. THOMAS'S HOSPITAL IN 1894.

The following statistics have been compiled by Mr. T. Oates Halliwell, M.R.C.S., &c., the present Clinical Assistant to the Department. They have been arranged upon the lines of the previous statistics, and it remains only for me to thank Mr. Halliwell for the accuracy with which he has accomplished his task.

FELIX SEMON.

Total Number of New Cases treated in the Special Department for Diseases of the Throat during the year 1894.

	Number of cases.		
	Male.	Female.	Total.
A. Pharyngeal Affections	339	386	725
B. Laryngeal Affections	48	62	110
C. Affections of Nose and Accessory Cavities	6	9	15
D. Buccal and Œsophageal Affections	11	12	23
E. General and Miscellaneous Affections	21	63	84
Totals	425	532	957

A. *Pharyngeal Affections.*

Disease.	Number of patients.		
	Male.	Female.	Total.
1. Acute and subacute pharyngitis	35	34	69
2. Chronic pharyngitis	51	59	110
3. Pharyngitis and hypertrophy of lingual tonsil	1	3	4
4. Ulcerative pharyngitis	—	1	1
5. Retro-pharyngeal abscess	—	1	1
6. Paræsthesia of pharynx	1	—	1
7. Acute tonsillitis	40	32	72
8. Subacute tonsillitis	82	92	174
9. Chronic tonsillitis and hypertrophied tonsils	53	81	134
10. Peritonsillitis	6	8	14
11. Peritonsillar abscess	5	3	8
12. Syphilis *a.* Congenital	—	2	2
12. Syphilis *b.* Secondary	14	10	24
12. Syphilis *c.* Tertiary	7	3	10
13. Ulcer on soft palate of doubtful nature	—	1	1
14. Post-diphtheritic paralysis	—	2	2
15. Papillary growth on uvula	—	1	1
16. Bifid uvula	—	1	1
17. Adenoids	26	28	54
18. Adenoids with enlarged tonsils	18	24	42
Totals	339	386	725

B. *Laryngeal Affections.*

Disease.	Number of patients.		
	Male.	Female.	Total.
1. Acute laryngitis	3	3	6
2. Subacute laryngitis	5	17	22
3. Chronic laryngitis	18	15	33
4. Tuberculosis of larynx	9	4	13
5. Lupus of larynx	—	1	1
6. Syphilis of larynx: *a.* Secondary	2	2	4
6. Syphilis of larynx: *b.* Tertiary	—	1	1
7. Perichondritis	1	—	1
8. Neoplasms of larynx: *a.* Papilloma	—	1	1
8. Neoplasms of larynx: *b.* Fibroma	—	1	1
8. Neoplasms of larynx: *c.* Malignant	3	—	3
8. Neoplasms of larynx: *d.* Of doubtful nature	1	—	1
9. Paralysis of: *a.* Abductors	4	1	5
9. Paralysis of: *b.* Adductors (hysterical aphonia)	—	12	12
9. Paralysis of: *c.* Interarytænoid muscle	1	—	1
10. Partial aphonia, ? cause	—	3	3
11. Syphilitic ulcer of trachea	1	—	1
12. Tracheal stridor, ? from gumma	—	1	1
Totals	48	62	110

C. *Affections of Nose and Accessory Cavities.*

Disease.	Number of patients.		
	Male.	Female.	Total.
1. Epistaxis	—	1	1
2. Ozæna	—	1	1
3. Rhinitis	2	3	5
4. Mucous polypi	1	2	3
5. Empyema of antrum	—	1	1
6. Lupus of septum nasi	—	1	1
7. Enchondroma of septum nasi with pharyngitis	1	—	1
8. Nasal stenosis	1	—	1
9. Deviation of septum nasi	1	—	1
Totals	6	9	15

D. *Buccal and Œsophageal Affections.*

Disease.	Number of patients.		
	Male.	Female.	Total.
1. Stomatitis	6	4	10
2. Ulcerative stomatitis	1	1	2
3. Glossitis	1	—	1
4. Gumma of tongue	1	—	1
5. Lingual varix	—	1	1
6. Foreign body in œsophagus	—	1	1
7. Supposed foreign body in œsophagus	1	2	3
8. Œsophageal obstruction of doubtful nature	1	2	3
9. Dysphagia, ? neurotic	—	1	1
Totals	11	12	23

E. *General and Miscellaneous Affections.*

Disease.	Number of patients.		
	Male.	Female.	Total.
1. Bronchitis	3	3	6
2. Broncho-pneumonia	—	1	1
3. Phthisis	1	—	1
4. Anæmia	—	3	3
5. Debility	2	12	14
6. Post-scarlatinal debility	1	—	1
7. Dyspepsia	1	4	5
8. Diphtheria	—	1	1
9. Renal (including 1 male post-scarlatinal nephritis)	1	2	3
10. Abscess of neck	1	—	1
11. Tuberculosis of skin of neck	1	—	1
12. Enlarged cervical glands	—	2	2
13. Tubercular glands of neck	1	1	2
14. Parotitis	1	2	3
15. Goitre	2	6	8
16. Impetigo	1	—	1
17. Nothing abnormal detected	5	27	32
Totals	21	63	84

REPORT

OF THE

AURAL DEPARTMENT

FOR THE YEAR 1894.

By RICHARD LAKE, F.R.C.S.

During the year 1894, 663 new cases were attended, of which 653 were aural and 10 were cases of nasal and diseases of adjacent structures. No cases have been inserted under two or more headings, it being considered better to adhere to the method adopted in the preceding years.

During the year 137 operations were performed in the out-patient room, a detailed list appearing in Section D. These necessarily do not include those cases requiring admission.

	Males.	Females.	Total.
A. External Ear and External Meatus.			
Cerumen	43	29	72
Eczema	5	6	11
Abscess of meatus	1	1	2
Aural exostosis	0	1	1
Foreign bodies (pebbles 1, pea 2, wool and tobacco)	1	5	6
Abscess, mastoid	9	1	10[1]
Total	59	43	102
B. Middle Ear.			
Traumatic myringitis	1	1	2
Acute otitis media:			
(*a*) Without perforation	4	7	11
(*b*) With perforation	17	16	33[2]
Chronic otitis media	30	23	53
Do., suppurative	173	204	377[3]
Adenoid vegetations	27	22	49
Eustachian obstruction	10	14	24
Otalgia	1	5	6
Cicatricial membrana tympani	1	1	2
Senile changes in membrana tympani	1	0	1
Total	265	293	558
C. Internal Ear.			
Menière's symptoms	2	0	2
Syphilis	3	1	4
Degeneration of eighth nerve	6	1	7
Do. following acute rheumatism	1	0	1
Aural vertigo	3	3	6
Nerve tinnitus	6	6	12
Labyrinthine concussion	1	0	1
Total	22	11	33
D. Operations.			
Adenoids	47	45	92
Aural polypi	18	13	31
Meatal abscess	2	1	3
Paracentesis, membrana tympani	5	6	11
Total	72	65	137

[1] These cases appear in the operation returns of the general surgical report.

[2] One case was complicated with facial paralysis.

[3] One case was complicated with facial paralysis, and one with epilepsy.

THE ELECTRICAL DEPARTMENT.

In view of the recent reorganisation of this department, a short account of the changes that have been made and of the work that has been done may not be out of place.

For some time past the post of Medical Officer to the Department had been vacant; the supply of apparatus was of the most limited description, and the space allotted for out-patients was utterly inadequate. At this crisis in the existence of what should be a valuable branch of hospital work, the Governors decided to make a special money grant, which should be expended partly in enlarging the accommodation for the electrical treatment of out-patients, partly in the purchase of electrical apparatus. The structural changes that were made doubled the size of the electrical out-patient room. The supply of new apparatus—which included batteries, constant and interrupted, rheostat and galvanometers—was fairly complete for immediate purposes, though it would hardly excite the admiration of a latter-day electrical specialist. Soon afterwards a clinical assistant was appointed, whose co-operation has proved to be of the greatest value. At the present time three or four patients can be treated simultaneously. New cases are seen on Thursday afternoons at 2 p.m., only those being admitted who come either with a recommendation from a medical man, or are referred from the other out-patient departments or wards of the Hospital. In this way the embarrassing effects of the popular belief in electricity as a panacea for all ailments are avoided. The department in

its resuscitated condition has now been at work about six months, and has, it is hoped, done something to justify its renewed existence.

The number of patients is not sufficient for a formal statistical report, but it is hoped that a brief clinical record of special cases may be found of interest—not necessarily, it will be noticed, from the point of view of electricity, but from that of general medicine. It is possible that in the future medical electricity may claim a more or less independent position, but at present that time has certainly not arrived, and in the meanwhile the youthful art must be content to take its place as handmaid rather than mistress in the domain of therapeutics.

Of the surgical cases, although they constitute a large proportion of the patients, little need be said, not because they were lacking in interest, but because the interest they excite is purely practical and personal, and lies in the details of examination. For the practice of electro-diagnosis they certainly form the most valuable material possible, on account of the commonly unilateral nature of the lesion. Amongst these were numerous examples of injuries to peripheral nerves, particularly the musculo-spiral. Several of these having been submitted to operation, the results will be found in another part of this volume. Two cases of rupture of the brachial plexus were also explored, but without very satisfactory results.

Of non-traumatic cases the following seem worthy of notice.

Neuritis of the musculo-cutaneous of the arm.—A man aged forty complained of pain and loss of power in the right upper arm of a fortnight's duration. Onset was comparatively sudden. The pain was of considerable intensity, and was referred to the anterior surface of the limb. There was no history of alcohol, lead, or syphilis. Twelve years before the patient had been treated in the Electrical Department at St. Thomas's Hospital for what he described as a similar affection of the left forearm. This also, according to his account, had come on suddenly with severe pain. The pain had disappeared after some months, but the arm had since been more or less useless.

On examination, on the left side there was found to be complete musculo-spiral paralysis with wasting of muscles and loss of irritability to all but strong currents, either constant or interrupted. On the right side the biceps were very flabby and markedly wasted. The muscle was not tender to the touch or on pressure, and there appeared to be no affection of sensation. The electrical reactions were as follows:—Marked loss of irritability to the faradic current, with slight loss also to the voltaic. Contraction was sluggish, and ACC was greater than KCC. For some weeks the muscle continued to waste rapidly, until hardly any muscular tissue appeared to be left. At the same time faradic irritability became lost, at all events to any strength of current that it was possible to apply to a somewhat nervous patient. When the case seemed almost hopeless, improvement set in, advanced rapidly, and terminated in complete recovery. The whole duration of the illness was between five and six months. The affection was throughout limited to the biceps, the other muscles of the extremity showing no change either as regards voluntary power or electrical reactions.

The patient was treated with the constant or interrupted current according to the reactions obtained, and received by mouth ten grains of potassium iodide three times a day. It is impossible to say to what immediate cause recovery was due. Of the three powers at work—electricity, potassium iodide, and the healing force of nature,—the last two were probably the most potent. Cases of unexplained neuritis, especially of the ulnar nerve, are certainly not uncommon, but this particular example had several exceptional features. The occurrence of a previous attack, possibly of the same nature, the severity and unusual localisation of the inflammatory symptoms in the present affection, with its rapid recovery, all seem to make the case worthy of notice.

Hysterical writer's cramp.—The patient, an extremely well-nourished, healthy-looking girl, fourteen years of age, complained of inability to write or sew for the past year on account of spasm in the thumb and forefinger. During the past eighteen months she had been liable to fits—three in all,—which seem to have been of an epileptic nature. One

occurred during the night, in which she bit her tongue and passed urine into the bed. In one of these fits a year ago the patient was bled from the right arm by a medical man, and the limb was kept fixed in splints in a semi-flexed position for several weeks after. On the removal of the splints, the symptoms of the present affection developed themselves. The patient is unable to fully extend the arm at the elbow-joint, but does not base any complaint on this. There is no complaint of pain or weakness, and for all purposes except those of writing or sewing, the limb is as useful as ever. The child had attended school in the ordinary way, but had never written or sewn to any extent. On examination, both arm and hand were found to be well nourished, without any sign of local wasting. No affection of sensation could be detected at the time, but when the patient was tested with a weak coil current she developed strong emotional tendencies, and in fact became almost uncontrollable. The electrical reactions were normal. When she attempted to write, it was seen that the disability was due to flexor spasm affecting specially the thumb and forefinger in true writer's-cramp fashion. An interesting suggestion was subsequently made that the spasm was produced reflexly by implication of a cutaneous nerve twig in the scar left by the bloodletting, and the discovery of partial anæsthesia over the area of the internal cutaneous nerve lent this some support. It was found, too, that the scar in question was intensely hyperæsthetic. On the other hand, a small superficial scar in the neck was equally sensitive, and by means of suggestion the patient could be made to express the intensest agonies from the slightest possible cause. Unfortunately she soon after passed from observation, still unrelieved.*

The combination of neurosis and local strain in the production of writer's cramp is generally recognised to be almost invariable, and the proportions of the two factors may vary within very wide limits. Here, however, the element of local strain came down to vanishing point, and the affection seems to have developed simply as a result of

* This patient died six months later from acute tuberculosis following influenza.

the extremely neurotic patient's attention being attracted to the limb. In such cases it is very unusual to find such a specialised spasm without either hyperæsthesia or paralysis.

Although the symptoms were not absolutely limited to the act of writing, there seems to be no reason against calling the case one of writer's cramp. In this affection it is very common for the disability, especially in the later stages, to extend to similar finely co-ordinated acts, such as sewing or piano-playing.

The occurrence of this disease before puberty is certainly rare, and when it does occur it always, according to Strümpell's experience, takes the form of tremor and not that of spasm.

Many cases of lead neuritis have been under treatment, but few of these showed any special feature. Only one example was seen of a condition by no means infrequent in this class of case—the presence of the reaction of degeneration without loss of voluntary power. The patient was under observation for a fortnight, and then disappeared, so it is impossible to say if paralytic symptoms eventually developed. In another case the paralysis was of the double type—peripheral and spinal—described by Gowers. The extensor muscles of the forearm had been affected acutely, were almost completely paralysed, and had typical reaction of degeneration, without, however, very marked wasting. There was, in addition, advanced wasting of the small muscles of the hand corresponding in type to that of progressive muscular atrophy. The loss of power was proportionate to the wasting, and there was a corresponding diminution of irritability, without other alteration in reaction, to both faradic and voltaic currents. The condition of the musculospiral group improved rapidly under treatment, while that of the muscles of the hand showed no change. The disease in this latter group had evidently been present for a considerable period, but had failed to excite the patient's alarm on account of the comparatively slight loss of power.

As might be expected, cases of functional disease have been numerous, and have naturally been most rapidly responsive to treatment. Two cases of monoplegia, each of about two years' duration, recovered completely in the space

of two months. The dry faradic brush was found the most effectual form of stimulation. In one case of clonic spasm of the sterno-mastoid and other deep muscles of the neck of six years' duration, the somewhat vigorous application of the interrupted current effected a cure in about two months. The patient then ceased to attend, but reappeared a month or two later, having had influenza in the interval with some recurrence of the symptoms. These were again subsiding when she disappeared, and so, unfortunately, nothing can be said of her final condition. In all probability she has not relapsed, or she would have again presented herself for treatment.

In concluding this somewhat desultory account, I have to thank both the physicians and surgeons of the hospital for the very cordial help that has been given to the department by the supply of clinical material.

PRINTED BY ADLARD AND SON,
BARTHOLOMEW CLOSE, E.C., AND 20, HANOVER SQUARE, W.

St. Thomas's Hospital
MEDICAL SCHOOL.

CALENDAR
AND
PROSPECTUS
FOR THE
YEAR COMMENCING OCTOBER 1ST, 1895.

1895 & 1896.

LONDON:
PRINTED BY W. P. GRIFFITH & SONS, LIMITED,
PRUJEAN SQUARE, OLD BAILEY, E.C

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THE ST. THOMAS'S HOSPITAL AMALGAMATED CLUBS.

The several Students' Clubs were amalgamated in July, 1888, and are maintained by the subscriptions of the Members, and by a yearly grant from the Medical and Surgical Officers and Lecturers.

The Amalgamated Clubs comprise the Students' Club, the Medical and Physical Society, the St. Thomas's Hospital Gazette, and the following Clubs:—Athletic, Cricket, Cross Country, Football (Rugby and Association), Lawn Tennis, Rifle, Rowing, and Swimming.

All Students are strongly advised to join the Amalgamated Clubs when they enter the Medical School.

The Annual Subscription to the Amalgamated Clubs is Two Guineas. After the payment of five consecutive subscriptions the Student becomes a Life Member.

Life Membership may be compounded for in the first year by payment of Seven Guineas; in other years, by payment of Six Guineas.

New Club premises adjoining the Medical School were opened in June, 1894. They contain a Dining Room (51 ft. × 39 ft.) and a Smoking and Reading Room (distinct from the School Library), 51 ft. × 29 ft., supplied with Daily and Illustrated Weekly Papers, and a Gymnasium. A Cloak Room with Lockers, and a Lavatory with Bath Rooms, are in the old building.

Subscriptions or Composition Fees may be paid to the Medical Secretary, Mr. G. RENDLE, or the Librarian, Mr. G. S. SAUNDERS.

MEDICAL SCHOOL.

A Register of LODGINGS suitable for Students has been recently revised, and is kept in the Secretary's Office. Information as to terms, accommodation, &c., can be obtained on application. This Register has been especially prepared with a view to the convenience of new Students for whose accommodation in lodgings or otherwise no definite arrangements have been made.

Medical Practitioners, Clergymen, and Private Families residing in the neighbourhood receive Students for residence and supervision.

For information on all matters relating to the Medical School, Prizes, Scholarships, &c., application should be made to the Medical Secretary, Mr. G. RENDLE, at the Hospital, Albert Embankment, S.E., personally (10 to 4, Saturday, 10 to 1) or by letter.

St. Thomas's Hospital

MEDICAL SCHOOL.

The WINTER SESSION 1895-96 will commence on October 2nd, and terminate on March 31st.

The SUMMER SESSION will begin on May 1st, and terminate on July 31st.

The Prizes will be distributed in the Governors' Hall, on WEDNESDAY, October 2nd, at 3 P.M. During the afternoon the various Departments of the Hospital and School will be open for the inspection of Visitors.

Refreshments will be provided in the Library.

The Annual Dinner, in which all former and present Students are invited to join, will take place the same evening at the Hotel Metropole, at 6 for 6.30 o'clock, Dr. Payne in the Chair.

THE first Hospital of St. Thomas, within the precinct of the Priory of St. Mary Overie, being destroyed by fire in the year 1207, the prior and convent erected in the same year near the site of their house a temporary hospital. This building was in the emergency used for religious purposes; mass was said there until the priory was rebuilt. In 1228 Peter de Rupibus, Bishop of Winchester, built the Hospital of St. Mary or St. Thomas, Overie, on the opposite or eastern side of the highway, on land provided by Amicius, Archdeacon of Surrey, and dedicated it to St. Thomas the Martyr.

The following is a translation of the "charter" of 1228:—

"The Lord Peter's charter of indulgence for twenty days granted by him for this hospital.

"Peter, by the grace of God Bishop of Winchester, to all the faithful in Christ in the diocese of Winchester, greeting. In Him who is the salvation of the faithful. As saith the Apostle, bodily discipline which consists in fasts, vigils, and other mortifications of the flesh, profiteth little, while piety availeth for all things, having the promise of the life which now is, and of that which is to come.

"Our Lord Jesus Christ among the works of piety enumerates, commends, and teaches us to fulfil six, as though more praiseworthy and more meritorious than the rest, saying, 'I was an hungred, and ye gave Me to eat; I was thirsty, and ye gave Me to drink; I was a stranger, and ye took Me in; I was naked, and ye clothed Me; I was sick, and ye visited Me; in prison, and ye came to Me.' To them that

perform these works of piety He shall grant His blessing and the glory of His heavenly kingdom, saying, 'Come, ye blessed of My Father, receive the kingdom which has been prepared for you from the beginning of the world.' But to them that neglect and do not perform works of compassion He threatens His curse and the penalty of eternal fire, saying, 'Go, ye cursed, into eternal fire, which has been prepared for the devil and his angels.' It is therefore to be borne in mind, my dearest sons, and more deeply laid to heart, how needful and how conducive to the salvation of our souls it is to exercise more readily those works of piety whereby blessing is promised to us, and the felicity of eternal life is gained.

"Behold at Southwark an ancient hospital, built of old, to entertain the poor, has been entirely reduced to cinders and ashes by a lamentable fire. Moreover, the place wherein the old hospital had been founded was less suitable, less appropriate for entertainment and habitation, both by reason of the straitness of the place, and by reason of the lack of water and of many other conveniences: according to the advice of us, and of wise men, it is transferred and transplanted to another more commodious site, where the air is more pure and calm, and the supply of waters more plentiful. But whereas this building of the new hospital calls for many and manifold outlays, and cannot be crowned with its due consummation without the aid of the faithful, we request, advise, and earnestly exhort you all, and with a view to the remission of your sins enjoin you, according to your abilities, from the goods bestowed on you by God, to stretch forth the hand of pity to the building of this new hospital, and out of your feelings of charity to receive the messengers of the same hospital coming to you for the needs of the poor to be therein entertained, that for these and other works of piety you shall do, you may, after the course of this life, reap the reward of eternal felicity from Him who is the Recompenser of all good deeds, and the loving and compassionate God. Now we, by the mercy of God, and trusting in the merits of the glorious Virgin Mary, and the Apostles Peter and Paul, and St. Thomas the Martyr, and St. Swithin, to all the believers in Christ, who shall look with the eye of piety on the gifts of their alms—that is to say, having confessed, contrite in heart and truly penitent, we remit to such twenty days of the penance enjoined on them, and grant it to them to share in the prayers and benefactions made in the church of Winchester, and other churches erected by the grace of the Lord in the diocese of Winchester. Ever in the Lord; Farewell."

The Bishop of Winchester or the Archbishop seems to have granted, in 1277, to the Brethren power to elect their own Master; in a visitation, 1323, they are ordered to follow the rule of St. Augustine—the rule of the parent house—in obedience, chastity, renunciation of individual property, and the Master to eat with the Brethren.

In 1417 the Master and Brethren formed a Court of themselves, and exercised authority within the precincts of the Hospital over persons regular or secular, and in cases civil or even criminal.

The hospital, built in 1228, had by 1507 become dilapidated and insufficient; great efforts were then made to rebuild and enlarge it.

In the Duchy of Lancaster records there is "the Rentall of Thomas Becketts hospitall in Southwarke, of all the lands and tenements belonging to the hospitall." It contains the names of the tenants and the rents paid; it is without date, but from internal evidence must be early in the sixteenth century.

Within the precincts of the hospital was the renowned printing press of James Nycolson, who, in 1527, signed the contract for the painted windows of King's College, Cambridge, as "James Nycolson, of St. Thomas's Spyttell in Southwark." The most remarkable issue from this press was the first English Bible printed in England, inscribed thus—"Imprynted in Southwarke in St. Thomas Hospitale by James Nycolson. Dedicated by M. Coverdale to the King 1537."

About this time there were a Master, Brethren, and three Lay Sisters; forty beds were made up for poor, infirm, and impotent people, who were supplied with victuals and firing.

In the year 1535, Henry VIII. was excommunicated by Pope Paul III., and, declaring himself head of the church, proceeded to dissolve the Catholic houses, whose large revenues went to the Crown. There seem to have been 645 monasteries and abbeys thus treated, twenty-eight of which had abbots with seats in Parliament, ninety colleges and free chapels, and 110 hospitals of various descriptions. It is certainly in favour of the sweeping change that so able and honest a man as Sir Richard Gresham, the Lord Mayor of London, should have put his hand to the following petition to the King:

"Most redowted, puysant, and noble Prince * * * *—here and within the cytie of London be iij hospitalls or spytells commonly called Seynt Georges Spytell, Seynt Barthilmews Spytell, and Seynt Thomas Spytell, and the new Abbey of Tower Hill, founded of good devotion by auncient fathers, and endowed with great possessions and rents only for the reliefe, comforte, and helping of the poore and impotent people lying in every street, offending every clene person passing by the way with theyre fylthy and nasty savors. Wherefore may it please your merciful goodness, enclyned to pytie and compassion, for the reliffe of Xts very images, created to his own similitude, to order by your high authoritie, as supreme head of this Church of England, or otherwise by your sage discretion, that your mayer of your cytie of London, and his brethren the aldermen for the time being, shall and may from henceforth have the order, disposition, rule and governaunce both of all the lands, tenements, and revenues apperteynyng and belongyn to the said hospitals, governors of them, and of the ministers which be or shall be withyn any of them, and then your grace shall facilie perceyve that where now a small number of Chanons, Priests, and Monkes be founde for theyr own profitt only, and not for the common utilitie of the realme, a great number of poore, needy, syke and indugent persones shall be refreshed, maynteyned, and comforted: and also healed and cured of their infermities frankly and freely by physicions, surgeons and potycaries, which shall have stipende and salarie only for that purpose; so that all impotent persones not able to labour shall be releved, and all sturdy beggars not willing to labour shall be punished."

St. Thomas's Hospital being claimed by the King as Church property, was surrendered to him by Thomas Thirleby, the then master, on the 15th July, 1538. It was called St. Thomas à Becket's Spittil. Its yearly revenue was estimated at £266 17*s.* 6*d.*, and an annual pension of 5*s.* 8*d.* was payable by the master, and another of 2*s.* 1*d.* by the curate, to the Archdeacon of Surrey. Soon after the seizure, we find that the citizens of London purchased of the Crown some of its landed estates, producing about £160 yearly. The want of the hospital thus destroyed was felt immediately. Wounded soldiers from the army in France, and the sick poor in general were without provision or help, and Henry proposed granting to the city the Mansion house of St. Bartholomew's, the dissolved house of Grey Friars adjoining, and the unoccupied fabric of St. Thomas's Hospital. The latter was intended by Henry to receive the name of the Hospital of the Holy Trinity, and to be allotted exclusively to lame, wounded, and diseased soldiers. The monastery of Grey Friars was to be for the education and maintenance of fatherless children and those of poor parents. The intentions of Henry were overtaken by death, but not before he had conferred upon the citizens of London the Hospital of St. Bartholomew's and also that of Bethlem for lunatics.

It is from the death of Henry that the connection of St. Thomas's Hospital with the City of London appears to begin. To meet the needs of the sick and destitute who had before depended on the charity of the religious houses, a Committee or Board of Inquiry was instituted by the citizens, with the sanction of King Edward. About 2,100 souls were reported as fit recipients of relief, as fatherless children and invalids, or as "Idle rogues of both sexes who were levying contributions on public sympathy by feigned tales of sorrow." It was proposed to establish receptacles for each class in the unoccupied monastic buildings, and a pecuniary contribution was set on foot to complete the work. They bought the dissolved house of the Franciscans or Grey Friars near St. Bartholomew's Hospital, and also by charter from the King received a grant as follows: "That the said mayor, commonalty, and citizens, and their successors, may have and enjoy all the franchises, immunities, and privileges whatever, which any Archbishop of Canterbury, and which the said Charles late Duke of Suffolk, or any master, brethren, or sisters of the late Hospital of St. Thomas in Southwark aforesaid; or any Abbot of the said monastery of St. Saviour, Saint Mary Bermondsey, next Southwark aforesaid, or any prior and convent of the priory of St. Mary Overie, ever had or enjoyed, or which we hold or enjoy, or our most dear father Henry the VIIIth, late King of England, or had enjoyed, or ought to have, hold, and enjoy the same: and that none of our heirs or successors may intermeddle with this our grant."

The Grey Friars became Christ's Hospital, and the Southwark site the Hospital of the Holy Trinity or St. Thomas's. The Lord Mayor and certain citizens then met on the 6th of October, 1552, and constituted themselves by royal permission governors of the hospitals, and almoners of the money collected. The Hospital of the Holy

Trinity they named in compliment to Edward, the "King's Hospital," and ordained it to receive 260 "wounded soldiers, blind, maimed, sick, and helpless objects."

They also directed that 380 children should be received into Christ's Hospital.

To complete the scheme, the old palace of Bridewell, in Blackfriars, where the Emperor Charles V. had lodged in 1522, when on a visit to Henry VIII., and where subsequently Wolsey had lived, was granted to the City by Edward as a house of correction for dissolute persons and idle apprentices, and for the temporary maintenance of distressed vagrants.

Lastly, the lands lately belonging to the Palace of the Savoy were conferred jointly on the three foundations; and a month only before the end of Edward's short reign, he incorporated by a second charter bearing date the 6th of June, 1553, the Lord Mayor and commonalty of the City of London in succession as perpetual governors of Saint Bartholomew's, Christ's, Bridewell, and the King's Hospital (which last received the name of St. Thomas the Apostle), and secured to them the possession of all the estates and revenues appertaining to them by previous deeds of gift. So were the royal hospitals founded.

In 1557 the laws were framed and printed under the name of "The Order of the Hospitalls of K. Henry the VIII. and K. Edward the VI., viz., St. Bartholomew's, Christ's, Bridewell, St. Thomas's. By the Maior, Cominaltie, and Citizens of London," &c.

Successive bequests and donations continued to augment the property of the charities, but during the reigns of Elizabeth, James I., Charles I., and the Protectorate, there appear few facts to note. In the abstract of the charter of confirmation granted to the City in 1663 by Charles II. on his restoration, we find the charter of Edward acknowledged and confirmed. The Great Fire of London in 1666 injured St. Thomas's in its revenues only; and a fire in Southwark anno 1676 ceased, "as if by divine interposition," at the hospital, probably a strong and isolated block of building. Shortly after this, however, it was found necessary to rebuild the fabric, and in 1693 subscriptions were opened for this purpose. A long list of benefactions in this and the succeeding year, amounting in all to £37,769 3s., is given by Golding, who especially singles out Sir Robert Clayton for eulogium. The statue then erected to him, and still extant, was originally dated 1701, but this was altered on his death to 1714. He was the founder of the old square in which it stood, replacing what Golding terms "a low swampy structure of the monastic order." In 1707, Mr. Guy, founder of the neighbouring hospital, erected three wards at his own charge. In 1717, the back block of buildings adjoining Guy's Hospital was added. With the exception of the two large blocks forming the Borough frontage, the north wing erected in 1833, and the south wing in 1839, the fabric seems to have remained unchanged until its purchase by the railway. In the centre of the front quadrangle stood the brass statue of King Edward, by Scheemakers, erected first in 1737, in pursuance of the will of Charles

Joye, some time treasurer of the hospital. It now stands in the grounds of the New Hospital.

It is a matter of more difficulty to trace the early history of the medical school in connection with the hospital. For the facts which follow we are indebted to the late R. G. Whitfield, Esq., who, from the long period during which his family had been associated with this foundation, was perhaps more qualified to speak than any other person.

The earliest mention in the hospital books of an apprentice is on December 31st, 1561. It is not until 1702 that a law is met with precluding pupils or surgeons from dissecting the dead body without permission from the treasurer.

In 1703 the grand committee resolved that no surgeon should have more than three "Cubbs," a term altered in 1758 to that of "Dressers." Besides these there were also apprentices to the surgeons of the hospital, and ordinary pupils. The first mention of lectures occurs soon after the appointment of Wm. Cheselden, in 1718. These he at first gave at his own house, but afterwards by permission in the hospital. They were on anatomy and surgery. In 1723 a regular registry was ordered to be kept by the apothecary, of pupils entering to surgical practice. In 1725, Guy's Hospital was opened for the reception of patients. In 1751 the assistant-physician was allowed to take two pupils for his own benefit. In 1768 an additional surgeon, Mr. Joseph Else, was elected to read lectures to the pupils.

The students of Guy's Hospital had by courtesy been allowed to attend the operations, and a similar favour admitted the St. Thomas's men to those at Guy's. But on the 8th November, 1768, it was formally resolved that the pupils of each hospital have the liberty of attending not only the operations, but surgical practice, and the money to be divided between the six surgeons and two apothecaries. Hence the appellation of the "United Hospital"; an amalgamation never extended beyond the surgical practice.

To Mr. Else is due the foundation of a regular anatomical school. Mr. Cline, who in 1781 was appointed to read lectures conjointly with Mr. Else, was mainly instrumental in bringing it to its greatest celebrity. At Mr. Else's death, Mr. Cline purchased the collection of preparations made by him and Mr. Girle, a former surgeon, which are now in the hospital museum, and became sole lecturer on anatomy. In 1788 he also became surgeon to the hospital. Mr., afterwards Sir Astley, Cooper was apprenticed to Mr. Cline in 1784, and before his election, as one of the surgeons to Guy's Hospital in 1800, was joint lecturer with his teacher on anatomy and surgery. They both added materially to the pathological museum.

In 1812 Mr. Henry Cline was elected surgeon to St Thomas's Hospital on his father's resignation, and carried on the anatomical lectures conjointly with Astley Cooper. In 1813 a new anatomical theatre and museum were built, the hospital giving £3000 for the purpose, and the two lecturers £1000 each. In 1815 Mr. Benj. Travers, an apprentice of Astley Cooper's at Guy's, was elected surgeon, according to the established rule which gave the vacancy

to the senior apprentice of either institution. Mr. Travers joined in the lectures, devoting his attention specially to ophthalmic surgery. In 1820 Mr. Joseph Henry Green was elected surgeon, on the death of his cousin Mr. Hy. Cline, having been apprenticed to his uncle Mr. Cline in the year 1809. From 1820 to 1825 he lectured with Astley Cooper. At this period all the branches of medical study,—viz., medicine, chemistry, materia medica, midwifery, botany and physiology—were lectured on at Guy's Hospital, and no physician of St. Thomas's was allowed to share them.

In 1824 Sir A. Cooper resigned the surgical chair, and Mr. C. Aston Key, his apprentice and nephew by marriage, joined Mr. Green in the office. Mr. Frederick Tyrrell, standing in exactly the same relation to Cooper, received permission to lecture on diseases of the eye. In the following year Cooper showed signs of cerebral disturbance, and the family desired that his nephew, Mr. Bransby Cooper, should be his successor. But the claims of Mr. John Flint South were considered superior, and he was appointed. From this cause the "United Hospitals" were severed, and a complete school set up in both. The majority of the students clung to Guy's, where the prestige of the great Sir Astley was still strong; and St. Thomas's school began to sink. The establishment of the Aldersgate Street private school under Tyrrell and Lawrence materially aided in this declension, as did also the secession of Dr. Elliotson to the newly-established University College, and the foundation of a fresh school at King's College, where for a time the surgical lectures were given by Mr. Joseph Henry Green, although a surgeon of St. Thomas's.

Owing to the unprosperous state of affairs in 1842, the Governors came forward to reorganize the school, and the aid of Mr. R. D. Grainger, whose popularity had been established in the Webb Street private school, was obtained. Mr. Joseph H. Green also rejoined the school; and Dr. Marshall Hall, Dr. Hodgkin, Dr. Martin Barry, Dr. Gregory, and Mr. Benjamin Travers contributed to its efficiency. In 1847 the Governors added to the School a lectureship on general pathology in connection with the hospital practice, and appointed to that lectureship and the associated clinical duties Mr. John Simon, whom afterwards (1853) they made one of the surgeons. In 1855 they added a lectureship on public health, and appointed to it Dr. Headlam Greenhow, who afterwards became physician to the Middlesex Hospital. This state of affairs continued until 1858, when the Governors gave back the management, and its attendant risks, into the hands of the lecturers.

For some years it was maintained with difficulty, and much self-sacrifice on the part of the staff, during what may be termed a transitional period, in the hope, now realized, of its once more developing into an institution worthy of its old traditionary glories.

From its foundation down to the year 1862, the hospital occupied the original site near London Bridge, but in that year the property was sold for the extension of the railway accommodation, and the establishment temporarily removed to the Surrey Gardens, where

it was carried on till the summer of 1871. In 1868 the first stone of the New Hospital at Westminster Bridge was laid by the Queen, and the completed building was opened by her Majesty in 1871. In September the patients were first admitted into the New Hospital, and the Medical School was opened on October the 2nd.

NIGHTINGALE NURSING SCHOOL.

The Committee of the "NIGHTINGALE FUND" have arrangements with the authorities of St. Thomas's for educating Women in the practice of Hospital Nursing. On the satisfactory completion of one year's training, they will be required to enter into service as Nurses in St. Thomas's or some other Hospital or Infirmary. A limited number of gentlewomen can be admitted under special agreements to this course of training, with a view to qualify themselves for superior appointments, or as District Nurses.

The Regulations as to the admission of Candidates may be obtained by writing to Miss L. M. Gordon, the Matron, St. Thomas's Hospital, London, S.E., to whom also application should be made by Institutions requiring trained Superintendents or Nurses.

Candidates should, whenever it is possible, make personal application to Miss Gordon, at the Matron's Office, at 10.30 a.m., on Tuesday or Friday.

The Nightingale Fund is the proceed of a public subscription raised at the close of the Crimean War, as a tribute to Florence Nightingale, for the services rendered by her in tending the sick and wounded soldiers in the Military Hospitals on the Bosphorus and at Balaklava. It was, by her request, vested in Trustees to enable her to establish an Institution for the training, sustenance, and protection of Nurses and Hospital attendants, and, as invested, produces an income of £1400. The management is in a Council, appointed by her. The School was opened at old St. Thomas's in 1860 with 12 probationers, increased to 39 in the present Hospital. 1263 candidates have been admitted and 746 trained Nurses have received appointments. A large number are now Matrons or Superintendents of Nurses.

THE HOSPITAL.

The original Hospital latterly contained 500 beds. The present building contains in all 572 beds. It consists of six blocks appropriated to the reception of patients; with one for the administrative and other offices, and one for the Medical School. The Ward blocks, though connected by corridors, stand apart, so as to afford free exposure in all directions. The Wards, with the exception of four which are placed on the ground floor, occupy the first, second, and third floors. Generally, each Ward affords accommodation for 28 beds, which are placed against the piers between the windows, so as to secure thorough ventilation. In a small Ward annexed to each larger Ward, there are two beds for cases requiring special care or treatment.

The operating theatres are unusually large, and have been lately thoroughly refitted, refloored, and provided with electric lighting. They are now peculiarly well adapted for the carrying out of aseptic surgery.

Of the whole accommodation of the Hospital, about 180 beds are appropriated to ordinary Medical cases, and 230 to ordinary Surgical cases. There are special Wards for the reception of diseases peculiar to women (21 beds); for diseases of the eye (25 beds); for venereal affections (8 beds); and for children under six years of age (30 beds). In one of the blocks, separated from the rest of the establishment, there are Wards for infectious diseases.

The space provided for each bed in the ordinary Wards is upwards of 1,800 cubic feet, and in the block appropriated to infectious diseases, about 2,500 cubic feet.

The Out-patients' Department is extensive and well arranged, and every facility is afforded for the treatment of different forms of Medical and Surgical casualties and diseases.

During the twelve months ending December 31st, 1894, the number of patients admitted into the Hospital amounted to 5,580. In the same period, 22,551 Out-patients have been treated, and in the Maternity department 1,912 women have been attended at their own homes. Casualties, to the number of 79,525 attendances, were treated during the same period.

THE MEDICAL SCHOOL.

The School buildings, isolated by a large quadrangle from the Hospital, stand at its southern extremity, between the river and the gardens of Lambeth Palace. They are very commodious, and every effort has been made to provide accommodation completely fulfilling modern requirements.

In the year 1885 the Anatomical Department was much enlarged and remodelled. In 1892 considerable alterations were carried out in the Physiological Department, giving increased space in the Laboratory and providing facilities for lectures and lantern demonstrations. In 1893-4 further extensive alterations were made. Two new wings were added to the main building, containing a large laboratory for the classes in Elementary Biology and Pathology, private working rooms for the teachers in those departments, a dissecting room for the Biology class, improved accommodation for the Operative Surgery class, and a large class room for the classes in Practical Surgery. At the same time the collection of Physical Apparatus was removed to a laboratory *en suite* with the Chemical Department.

New premises were also provided for the Students' Club, to which a Gymnasium has been added, and the arrangements are now such as to render it quite unnecessary for Students to leave the School buildings during the working hours of the day. Electric Lighting has been introduced into the new departments and part of the older building.

The plan inserted between pages 14 and 15 shows the changes in detail, both on the ground and first floors.

THE MUSEUM OF HUMAN AND COMPARATIVE ANATOMY AND PATHOLOGY.

Curator.—S. G. SHATTOCK, ESQ., F.R.C.S.

The Museum, which is of ample size and well lighted, has two galleries devoted entirely to the display of specimens illustrating Pathology: the different series are each preceded by a normal preparation of the organ to which they refer.

On the ground floor are the collections of Normal Human, and of Comparative Anatomy; there is, moreover, a series of type specimens of Pathology, selected to facilitate the study of this subject.

THE COLLECTION OF HUMAN ANATOMY contains a large number of dissected Preparations, illustrating the Organs of Locomotion and Sense; the Nervous System; the Digestive, Respiratory, and Urinary Apparatus; the Vascular System and Organs of Reproduction; and, in addition, a series of elaborate dissections. A new Catalogue of this collection has been drawn up by Mr. Shattock.

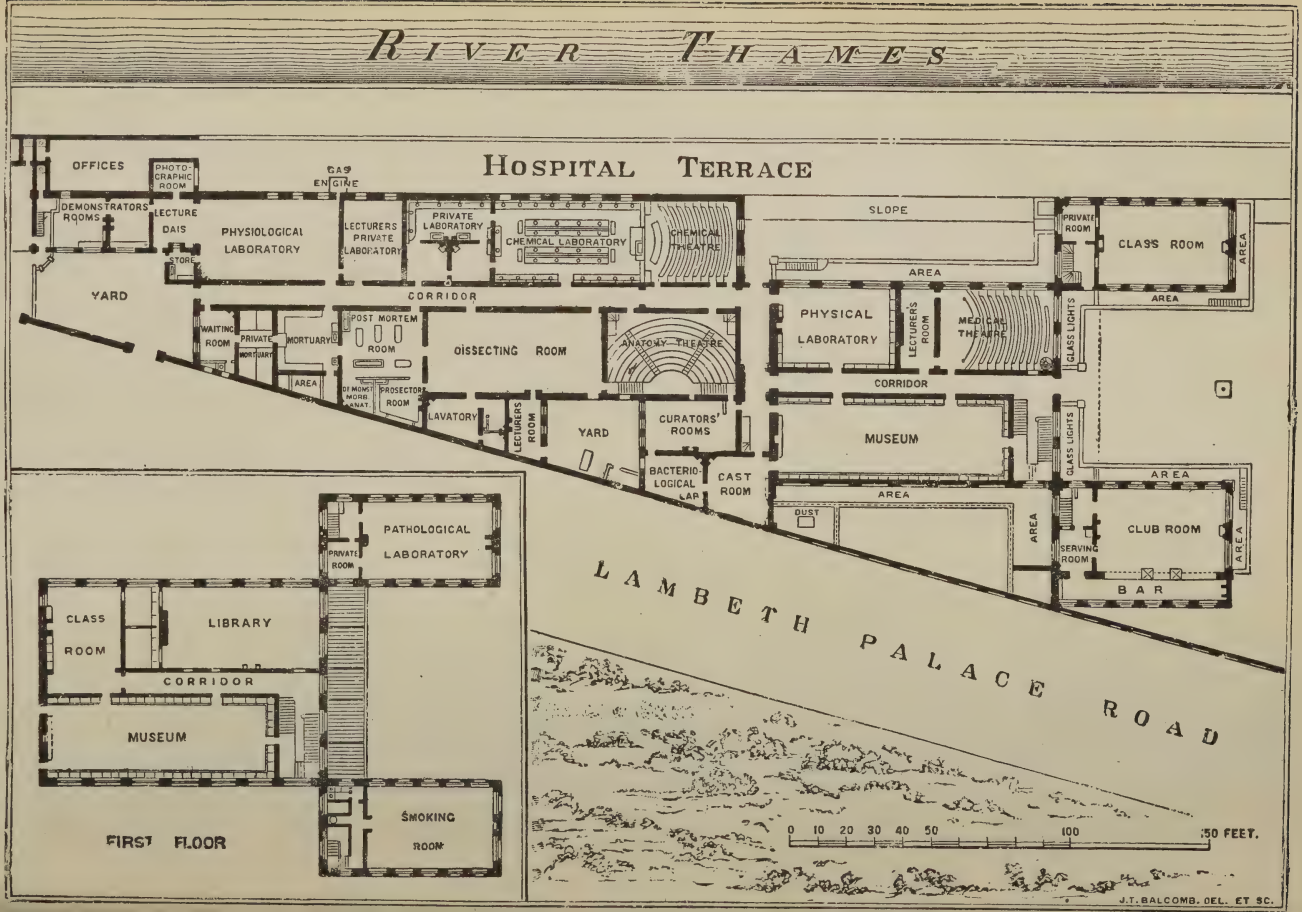
THE PATHOLOGICAL COLLECTION contains above 3,000 specimens, arranged in series as follows:—Injuries and Diseases of the Organs of Motion; of the Organs of Digestion, of Circulation, of Respiration, of the Nervous System, of the Genito-Urinary System, and Malformations. The descriptive Catalogue of this collection has been entirely re-written by Mr. Shattock: the previous edition was edited by Mr. Sydney Jones.

Among the earliest contributors to the Museum were Mr. Cline, Sir A. Cooper, Mr. Travers, and Mr. Tyrrell; and many of the specimens are of great historical interest: those used by Sir A. Cooper to illustrate his works on Dislocations and Fractures, on Hernia, and on the Testis, are contained amongst them, as well as two preparations showing the result of Ligature of the Abdominal Aorta, one a case of Sir A. Cooper's, another that of Mr. J. F. South's. In the collection, too, are Mr. Travers's preparations illustrating the process of nature in repairing Injuries of the Intestines, and those furnished by his experiments on the ligature of Arteries.

The section of Fractures has been enriched by Sir William MacCormac, who presented numerous specimens of gun-shot injuries, etc., obtained from cases under his care during the Franco-German War (1870); that of Diseases of the Liver, by a large number of Biliary Calculi presented by Dr. Ord; and that of Diseases of the Larynx, by specimens presented by Dr. Semon.

THE COLLECTION OF COMPARATIVE ANATOMY comprises about 400 dissected Preparations, and in addition an equal number of most carefully prepared osteological specimens. A large number of these dissections were made by Sir A. Cooper, to illustrate his Lectures, when Professor of Comparative Anatomy to the Royal College of Surgeons. A new Catalogue of this collection has been drawn up by Mr. F. G. Parsons.

THE CABINETS OF MICROSCOPICAL ANATOMY, which are under the charge of the Demonstrator of Practical Physiology, are available for use by Students who wish to examine them, subject to such regulations as may be deemed necessary.


RIVER THAMES
HOSPITAL TERRACE
OFFICES
PHOTO-GRAPHIC ROOM
GAS ENGINE
DEMONSTRATORS ROOMS
LECTURE DAIS
STORE
PHYSIOLOGICAL LABORATORY
LECTURERS PRIVATE LABORATORY
PRIVATE LABORATORY
CHEMICAL LABORATORY
CHEMICAL THEATRE
SLOPE
PRIVATE ROOM
CLASS ROOM
AREA
YARD
CORRIDOR
WAITING ROOM
PRIVATE MORTUARY
MORTUARY
POST MORTEM ROOM
AREA
DEMONST. MORBID ANAT.
PROSECTORS ROOM
DISSECTING ROOM
ANATOMY THEATRE
PHYSICAL LABORATORY
LECTURERS ROOM
MEDICAL THEATRE
GLASS LIGHTS
LAVATORY
LECTURERS ROOM
YARD
CURATORS' ROOMS
BACTERIO-LOGICAL LAB
CAST ROOM
MUSEUM
DUST
AREA
SERVING ROOM
CLUB ROOM
BAR
LAMBETH PALACE ROAD
PATHOLOGICAL LABORATORY
PRIVATE ROOM
CLASS ROOM
LIBRARY
CORRIDOR
MUSEUM
SMOKING ROOM
FIRST FLOOR
0 10 20 30 40 50 100 150 FEET.
J.T. BALCOMB, DEL. ET SC.

THE MATERIA MEDICA MUSEUM contains in cases a complete collection of all the chemicals and organic substances included in the British Pharmacopœia; all these are named and numbered. A second collection of all the chief medicinal substances is placed in drawers and is freely accessible to students. A large and very fine collection of dried medicinal plants, named according to the latest nomenclature, is displayed on the walls of the Museum.

The Museum is under the conjoint superintendence of the Lecturer on Pharmacy and Pharmacology and Mr. Shattock.

THE COLLECTION OF CHEMISTRY AND MINERALOGY is under the superintendence of Mr. Dunstan. The majority of the specimens were presented by the late Dr. Bernays.

The Museums are open to Students daily from 9 a.m. till 5 p.m., and every encouragement is given to Students to make use of the well-arranged educational series for the purposes of their studies.

THE LIBRARY.

The Library, to which Students have access with the permission of the Librarian, and which can be used by them as a Reading Room, has been recently completely re-arranged and re-catalogued, and electric lighting has been introduced. It contains a valuable collection of standard works; various periodicals are regularly taken in, and a number of modern text books are added from time to time for reference.

LABORATORIES, THEATRES AND CLASS ROOMS.

The Chemical, Physiological, and Anatomical Departments are complete in themselves. They consist of large Laboratories for Classes, Private Laboratories, and each is provided with its own Lecture Room. A separate Laboratory for the practical teaching of Physics contains the Physical Apparatus.

The Pathological Department beyond the Museum and Post Mortem rooms is provided with a large Laboratory for the Class in Pathological Histology, and a Bacteriological Laboratory under the charge of Mr. Shattock.

The Elementary Biology lectures and demonstrations are given in the large new Laboratory, and the Biological Dissecting Room and Lecturers Private Room are contained in the same building.

A special Theatre is devoted to the use of the Lecturers giving the more advanced systematic courses, such as Medicine, Surgery, &c., and two large class rooms are available for the Tutorial Classes held in connection with these courses. Special accommodation has also been provided for the Classes in Operative Surgery.

The new buildings were opened by H.R.H. the Duke of Connaught, K.G., President of the Hospital, on June 9th, 1894.

MEDICAL AND SURGICAL OFFICERS.

Consulting Physicians.
J. S. Bristowe, M.D. Lond., LL.D., F.R.S.
John Harley, M.D. Lond.

Consulting Surgeons.
Sir John Simon, K.C.B., Hon. M.D. Dub., F.R.S., D.C.L.
Sydney Jones, M.B. Lond.
John Croft.
Sir William MacCormac, M.A., D.Sc., M.Ch. Hon. Causâ.

Consulting Obstetric Physician.
H. Gervis, M.D. Lond.

Consulting Ophthalmic Surgeon.
R. Liebreich.

Physicians.
W. M. Ord, M.D. Lond.
J. F. Payne, M.D. Oxon.
S. J. Sharkey, M.A., M.D. Oxon.
T. D. Acland, M.A., M.D. Oxon.

Surgeons.
A. O. MacKellar, M.Ch.
H. H. Clutton, M.A. Cantab.
William Anderson.
B. Pitts, M.A., M.C. Cantab.

Assistant Physicians.
H. P. Hawkins, M.A., M.D. Oxon.
H. W. G. Mackenzie, M.A., M.D. Cantab.
H. G. Turney, M.A., M.B. Oxon.

Assistant Surgeons.
G. H. Makins.
W. H. Battle.
C. A. Ballance, M.S. Lond.
H. B. Robinson, M.S. Lond.

Obstetric Department.
Physician.—C. J. Cullingworth, M.D.
Assistant Physician.—R. Cory, M.A., M.D. Cantab.

Eye Department.
Surgeons { E. Nettleship. J. B. Lawford.

Throat Department.
Physician.—F. Semon, M.D. Berlin.

Skin Department.
Surgeon.—William Anderson.

Ear Department.
Surgeon.—C. A. Ballance, M.S. Lond.

Dental Department.
Surgeon.—C. E. Truman, M.A. Cantab.

Electrical Department.
Physician.—H. G. Turney, M.A., M.B. Oxon.

Resident Assistant Physician.
S. G. Toller, M.D. Lond.

Resident Assistant Surgeon.
F. C. Abbott, M.S. Lond., F.R.C.S.

Anæsthetists.
Walter Tyrrell and E. F. White, F.R.C.S.

Anæsthetist to the Dental Department.
E. H. G. Morris, B.A., M.B. Cantab.

Pharmaceutist.
Edmund White, B.Sc. Lond.

Demonstrators of Morbid Anatomy.
H. P. Hawkins, M.A., M.D. Oxon. H. W. G. Mackenzie, M.A., M.D. Cantab.
H. G. Turney, M.A., M.B. Oxon.

Consulting Chemist.
Wyndham R. Dunstan, M.A. Oxon., F.R.S.

Registrars.

Medical.	*Surgical.*	*Obstetric.*
C. R. Box, M.D. Lond.	C. S. Wallace, F.R.C.S.	W. W. H. Tate, M.D. Lond.

Lecturers.
A. W. Bennett, M.A., B.Sc. Lond.
T. Gregor Brodie, M.D. Lond.
Wyndham R. Dunstan, M.A., F.R.S.
F. G. Parsons, F.R.C.S.
H. Rayner, M.D.
Edward Seaton, M.D.
S. G. Shattock, F.R.C.S.

Curator of the Museum.
S. G. Shattock, F.R.C.S.

Librarian.
G. S. Saunders.

Dean of the School.
G. H. Makins, F.R.C.S.

Secretary to the School.
George Rendle, M.R.C.S.

LECTURERS AND DEMONSTRATORS.

LECTURERS.

Elementary Biology	Mr. PARSONS.
Chemistry, Chemical Physics, and Practical Chemistry	Mr. DUNSTAN.
Descriptive Anatomy	Mr. ANDERSON and Mr. MAKINS.
General Anatomy and Physiology ... *Practical Physiology and Histology* ...	Dr. BRODIE.
Midwifery, and Diseases of Women...	Dr. CULLINGWORTH.
Practical and Manipulative Surgery...	Mr. MACKELLAR & Mr. BALLANCE.
Medicine...	Dr. PAYNE and Dr. SHARKEY.
Surgery	Mr. CLUTTON and Mr. PITTS.
Pathological Anatomy...	Dr. HAWKINS and Mr. SHATTOCK.
Forensic Medicine and Toxicology ...	Dr. CORY and Mr. MACKELLAR.
Pharmacology and Therapeutics ...	Dr. MACKENZIE.
Diseases of the Eye	Mr. LAWFORD.
Mental Disease	Dr. RAYNER.
Public Health and Sanitary Science...	Dr. SEATON.
Clinical Surgery	Sir WILLIAM MACCORMAC (EMERITUS LECTURER).
Clinical Medicine...	The PHYSICIANS.
„ „ *Obstetric*...	Dr. CULLINGWORTH.
„ *Surgery*	The SURGEONS.
„ „ *Ophthalmic*	Mr. NETTLESHIP & Mr. LAWFORD.
Physics	Mr. DUNSTAN.
Botany	Mr. BENNETT.
Comparative Anatomy and Zoology...	Mr. PARSONS.

TEACHERS AND DEMONSTRATORS.

Chemistry	Dr. CROSSLEY and Mr. LE SUEUR.
Physics	Mr. LE SUEUR.
Practical Pharmacy	Mr. EDMUND WHITE.
Practical Anatomy	The LECTURERS, with Mr. PARSONS, Mr. ROBINSON, Mr. STABB, and Mr. FISHER.
Physiology and Practical Physiology...	Dr. BRODIE, with the Demonstrators.
Practical Medicine	Dr. MACKENZIE and Dr. TURNEY with Dr. BOX.
Practical and Manipulative Surgery...	The LECTURERS, with Mr. STABB.
Practical Obstetrics	Dr. CORY and Dr. TATE.
Electro-Therapeutics	Dr. TURNEY.
Morbid Anatomy	Dr. HAWKINS, Dr. MACKENZIE, and Dr. TURNEY.
Morbid Histology...	Dr. TURNEY.
Diseases of the Eye	Mr. FISHER.
„ „ *Throat*...	Dr. SEMON.
„ „ *Skin*	Mr. ANDERSON
„ „ *Ear*	Mr. BALLANCE.
„ , *Teeth*	Mr. TRUMAN.

SUGGESTIONS TO STUDENTS ABOUT TO ENTER THE MEDICAL PROFESSION.

Registration.* The commencement of Medical Study cannot be registered at the Office of the General Medical Council until the Student has passed a Preliminary Examination in the subjects of General Education as specified in the following list:

(1) English Language; (2) Latin; (3) Arithmetic, Algebra, and Euclid—Books I., II., III.; (4) Either Greek, Logic or any Modern Language.

Preliminary Examinations. A student who has not passed such an examination is recommended to pass either the Matriculation of the University of London, or the Professional Preliminary Examination of the College of Preceptors. The regulations respecting these may be obtained from the Registrar, University of London, Burlington Gardens, W., and the Secretary, College of Preceptors, Bloomsbury Square, W.C.

Certificates of Graduation, Matriculation, and the Local Examinations of British and Colonial Universities are accepted by the General Medical Council provided that the above-mentioned subjects be shown to have been included.

London University. Students who propose to obtain Medical Degrees in the University of London must pass both the Matriculation and the Preliminary Scientific Examinations before commencing their regular Medical Studies.

For the Preliminary Scientific Examination and the Intermediate Examination in Medicine special classes are held during the Winter and Summer Sessions (see p. 38).

For a Student who enters in October, intending to obtain the double qualification of the "Conjoint Board" (L.R.C.P. Lond. and M.R.C.S. Eng.), the following course of study is recommended. (For days and hours of Lectures, &c., see Time Table, p. 28.)

All Students are required to apply to the Medical Secretary for cards of Admission to the Lectures, &c., of each Session.

First Winter Session.

Lectures, &c. Anatomy, Elementary Biology, Elementary Physiology, Chemistry, and Physics. Anatomical and Physiological Demonstrations. Dissections.

Examinations. "Sessional" at Medical School in December and in March. Part III. (Elementary Biology) and Part IV. (Elementary Anatomy) of First Examination of the "Conjoint Board," in March.

First Summer Session.

Lectures, &c. Practical Chemistry and Practical Physiology, Demonstrations in Practical Pharmacy; Practical Instruction in Pharmacy may be obtained from the Hospital Pharmaceutist. (Fee, three guineas for three months, p. 37.)

Examinations. "Sessional" in July, and Parts I. (Chemistry and Physics) and II. (Practical Pharmacy)† of the "First Conjoint."

* The Regulations of the General Medical Council with regard to Registration may be obtained from Messrs. Spottiswoode & Co., 54, Gracechurch Street, London, E.C.

† Part II. (Practical Pharmacy) *may* be deferred and taken as part of the "Third Conjoint."

Second Winter Session.

Anatomy and Physiology with Demonstrations and Dissections. Practical Physiology. Tutorial Classes in Anatomy and Physiology. — Lectures.

"Sessional" in December and in March; "Tests," and "Second Conjoint" (Anatomy and Physiology) in March. — Examinations.

N. B.—The "Third Conjoint" cannot be taken until two years after the second examination has been passed; hence the importance of passing the second at this stage.

Second Summer Session.

Hospital Practice, Medical and Surgical.

Midwifery, Practical Obstetrics, Practical Surgery. — Lectures.

"Sessional" in July. — Examinations.

The course of instruction in Practical Medicine must be attended by Candidates for Out-Patient Clinical Clerkships.

Third Winter Session.

Hospital Practice, Medical and Surgical.

Medicine, Surgery, and Surgical Pathology, Practical Surgery, Practical Course of Pathological Anatomy. — Lectures.

"Sessional" in December and March. — Examinations.

Clinical Clerkship (if not held during July, August, and September), and Dressership, in the Out-Patient Departments.

Maternity Cases may be attended at any time after the Lectures on Midwifery and a course of Practical Obstetrics by Students who have passed the "Second Conjoint."

Third Summer Session.

Hospital Practice, Medical and Surgical, with Clerkship or Dressership.

Pathological Anatomy, Forensic Medicine, Mental Disease, Therapeutics, and Public Health. — Lectures.

"Sessional" in July. — Examinations.

Fourth Winter Session.

Hospital Practice, Medical, Surgical, the Special Departments, and Post-mortem Examinations. Clerk or Dress in special Departments and Post-mortem Room. Instruction in Vaccination. (Fee, one guinea, p. 37.)

Practical Course of Pathological Anatomy (if not taken in third winter), Clinical Lectures on Medicine and Surgery; Obstetric Demonstrations; Diseases of Women; Diseases of the Eye. — Lectures.

Fourth Summer Session.

Hospital Practice, Medical and Surgical, and Special Departments.

Clinical Medicine, Clinical Surgery. Tutorial Classes in Medicine, in Surgery, including operations upon the Dead Subject, and in Midwifery. — Lectures.

"Third Conjoint" in Medicine, Surgery, or Midwifery. — Examinations.

NOTE.—The three subjects *may* be taken at one examination.

Candidates for the Third Examination for the Diploma in Medicine and Surgery of the "Conjoint Board" are required to produce a certificate of attendance on not less than twenty labours. Students who have passed the "Second Conjoint," and have attended Lectures on Midwifery, and a Course of Practical Obstetrics, may enter their names for the Rota of Obstetric Clerks.

No Student is admitted to any part of the Third Examination of the "Conjoint Board" until at least two years after passing the Second Examination, and the latter cannot be taken until the end of the Second Winter Session.

Fifth Year.

Hospital Practice, Medical and Surgical, and the Special Departments.

Attendance at a Fever Hospital and Clinical Demonstration at a recognised Lunatic Asylum.

Advanced Students are strongly advised to avail themselves of the opportunities afforded for Clinical Study of Fevers at the Hospitals of the Metropolitan Asylums Board, and of Mental Diseases at Bethlem Hospital in their fifth year.

Examinations. The "Final Conjoint" in Clinical Medicine and Clinical Surgery, and in Midwifery if not taken at the Third Examination.

The Final Examination cannot be taken until twelve months after the Third, except by University Students. (See Special Regulations of the Conjoint Board.)

Preliminary Summer Session.

If a Student enters in May, intending to obtain the qualification of the Conjoint Board, he is advised to pursue the following course of study :—

Lectures. Elementary Biology, Lectures and Classes in Chemistry and Demonstrations in Practical Pharmacy.—Practical Instruction in Pharmacy may be obtained from the Hospital Pharmaceutist. (Fee, three guineas for three months, p. 37.)

Botany (if required for a higher examination).

Examinations. Part I. (Elementary Biology.) Part II. (Practical Pharmacy) of "First Conjoint" in July or October.

NOTE.—Students who join a Medical School in May have the advantage of an additional three months to devote to the preparation for the four parts of the First Examination of the "Conjoint Board."

All Students are required by the Governors to conform to the Regulations of the Hospital and Medical School, and the School Committee is empowered, with the approval of the Treasurer, to suspend or remove a Student at any time for adequate reason. (See also p. 36.)

As but few Lectures need be attended in the fourth and fifth years, the greater part of that time can, and should, be given to the practical study of disease in the Wards, Out-Patient Departments, and Post-Mortem Room.

Students intending to prepare for **University Degrees and other higher Examinations** should apply to the Medical Secretary for the Regulations relating thereto. (For Special Classes for these Examinations see p. 38.)

Students when qualified should use every effort to obtain one or more of the senior appointments open to them, especially those of House Physician, House Surgeon, and Obstetric House Physician. These and other appointments, of which details are given at p. 31, afford opportunities for obtaining practical professional knowledge which cannot be estimated too highly. No payment is required for any of them.

N.B.—The Regulations for the Sessional Examinations and Prizes will be found on pp. 32-33.

HOSPITAL PRACTICE.

CLINICAL TEACHING OF MEDICINE AND SURGERY.

CLINICAL instruction is given daily by the Physicians and Surgeons during their visits to the Wards, and by the Assistant Physicians and Assistant Surgeons in the Out-Patient Departments (Time Table, p. 22). Lectures on Clinical Medicine and Surgery are given in the afternoon every week throughout the academical year by one or more of the Physicians and Surgeons. A Special Course is also given by Sir W. MACCORMAC.

Diseases of Women.—Clinical instruction is given in Adelaide Ward on Tuesdays and Fridays at 2 p.m., and in the Out-Patient room on Wednesdays and Saturdays at 1.30 p.m.

Diseases of Children.—Instruction is given by Dr. CORY, in the Out-Patient room, on Saturdays at 1.30.

Midwifery.—A maternity department is connected with the hospital, women being attended in confinement at their own homes by students of the hospital, under the supervision of the Assistant Obstetric Physician (p. 32). Students are accompanied to their first cases by one of the Obstetric House Physicians.

Diseases of the Eye.—Clinical teaching in the Out-Patient rooms daily except Saturday. Clinical Lectures or Ophthalmoscopic Demonstrations weekly.

DAYS AND HOURS FOR SURGICAL OPERATIONS.

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
Surgical Operations	2.0	3.30	2.0	2.0	3.30	2.0
Gynæcological ,,	—	—	—	2.0	—	—
Ophthalmic ,,	—	—	—	2.0	—	—

Diseases of the Skin.—Clinical instruction by Mr. ANDERSON on Fridays.

Diseases of the Throat.—Clinical instruction by Dr. SEMON on Tuesdays and Fridays. During the Winter Session Dr. SEMON gives a short course of Clinical Lectures to senior students.

Diseases of the Ear.—Clinical instruction by Mr. BALLANCE on Mondays. During the Winter Session Mr. BALLANCE gives a short course of Lectures to senior students.

Mental Diseases.—Clinical instruction by Dr. RAYNER on Thursdays.

Diseases of the Teeth.—Mr. TRUMAN and Assistant give instruction in Dental Surgery on Tuesdays and Fridays.

Vaccination is taught practically by Dr. CORY, who is authorised by the Local Government Board to give certificates of proficiency in Vaccination at St. Thomas's Hospital. Fee, One Guinea (see p. 37).

Electro-Therapeutics.—Instruction is given by Dr. TURNEY on Thursdays.

Anæsthetics.—The mode of Administration is taught practically by Mr. TYRRELL and Mr. WHITE.

POST-MORTEM EXAMINATIONS.

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
Dr. HAWKINS	—	2.0	—	—	2.0	—
Dr. MACKENZIE	2.0	—	—	2.0	—	—
Dr. TURNEY	—	—	2.0	—	—	2.0

TIMES OF ATTENDANCE OF THE PHYSICIANS AND SURGEONS IN THE WARDS.

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
Dr. ORD	2	—	—	2	—	—
Dr. PAYNE	2	—	—	2	—	—
Dr. SHARKEY	—	2	—	—	2	—
Dr. ACLAND	—	2	—	—	2	—
Dr. CULLINGWORTH	—	2	—	—	2	—
Mr. MAC KELLAR	2	—	—	2	—	—
Mr. CLUTTON	—	2	—	—	2	—
Mr. ANDERSON	2	—	—	2	—	—
Mr. PITTS	—	2	—	—	2	—
Mr. LAWFORD	—	2	—	—	2	—

TIMES OF ATTENDANCE OF THE ASSISTANT-PHYSICIANS AND ASSISTANT-SURGEONS IN THE OUT-PATIENTS' ROOMS.

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
Dr. HAWKINS	1.30	—	—	1.30	—	—
Dr. MACKENZIE	—	—	1.30	—	—	1.30
Dr. TURNEY	—	1.30	—	—	1.30	—
Dr. CORY (Women and Children)	—	—	1.30	—	—	1.30
Mr. MAKINS	1.30	—	—	1.30	—	—
Mr. BATTLE	—	1.30	—	—	1.30	—
Mr. BALLANCE	—	—	1.30	—	—	1.30
Mr. ROBINSON	1.30	1.30	—	—	—	—

TIMES OF ATTENDANCE IN THE OUT-PATIENT SPECIAL DEPARTMENTS.

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
Mr. NETTLESHIP } (Diseases of	1.30	—	1.30	—	—	—
Mr. LAWFORD } the Eye)	—	1.30	—	1.30	1.30	—
Dr. SEMON (Diseases of Throat)	—	1.30	—	—	1.30	—
Mr. ANDERSON (Diseases of Skin)	—	—	—	—	1.30	—
Mr. BALLANCE (Diseases of Ear)	1.30	—	—	—	—	—
Dr. TURNEY (Electro-Therapeutics)	—	—	—	2	—	—
Mr. TRUMAN (Diseases of Teeth)	—	10	—	—	10	—
Dr. CORY (Vaccination)	—	—	11.30	—	—	—

LECTURES, CLASSES, & DEMONSTRATIONS.

A complete list of Lecturers and Demonstrators, p. 17.
Time-table of days and hours of Lectures, &c., p. 28.

ELEMENTARY BIOLOGY.

MR. BENNETT, B.Sc., AND MR. PARSONS.

A six months' practical course to meet the requirements of the "Conjoint Board" is held from October to March, and a revision class from May to July.

Special classes, for the Preliminary Scientific, are commenced in October for the July examination of the University of London. (Fee, see p. 38.)

BOTANY.

MR. BENNETT, B.Sc.

A course of lectures on Systematic Botany is given during the Summer Session. It comprises the general principles of the classification of plants, with demonstrations of the characters of all the more important natural orders, especially those of medicinal value. The lectures are illustrated by diagrams and fresh specimens. (Fee, see p 37.)

Special classes for the London University and other examinations commence in October. (Fee, see p. 38.)

COMPARATIVE ANATOMY.

MR. PARSONS.

A course of six lectures, especially intended for the primary examination for the Fellowship of the College of Surgeons, is given twice yearly. (Fee, see p. 37.)

CHEMISTRY AND CHEMICAL PHYSICS.

MR. DUNSTAN, F.R.S.

LECTURES on Chemistry and Chemical Physics are given three times weekly during the Winter Session, and on Chemistry during the Summer Session. These lectures are fully illustrated by experiments.

A course of Practical Work is commenced in January and is continued during the Summer Session.

These courses include the subject-matter of the various Examining Boards, and are specially arranged to afford the student an insight into the principles of chemical science and their application in Medicine.

A course of Chemical Demonstrations is given in connection with the Lectures on Toxicology and Forensic Medicine.

Special classes are held for students preparing for the Preliminary Scientific and Intermediate M.B. Examinations of the University of London, and for the Examinations of other Universities. (Fee, see p. 38.)

A special course of Practical Instruction is given in the Laboratory to Candidates for Diplomas in Public Health. (Fee, see p. 37.)

Arrangements may be made for additional Practical Work (Elementary and Advanced) in the Chemical Laboratory at fees which may be ascertained from the Medical Secretary.

ANATOMY.

MR. ANDERSON AND MR. MAKINS.

(*a*) ELEMENTARY.—A six months' course, consisting of two lectures and one oral examination weekly, is given for first-year students, dealing with osteology and attachments of muscles and ligaments.

(*b*) ADVANCED.—A six months' course, consisting of three lectures and one oral examination weekly, is given for second-year or more advanced students.

The lectures are illustrated by fresh dissections and preparations.

Classes, conducted partly by examination, partly by demonstration, are held during the latter half of the Winter Session, and deal with those sections of anatomy which cannot be included in the lecture course.

(*c*) PRACTICAL.—During both winter and summer sessions the dissecting room is open for the use of students, and the demonstrators attend daily. A number of stock preparations are displayed in the room, and the others are preserved for use in the tutorial classes.

Tutorial classes are held prior to the January, March and July examinations of the "Conjoint Board," which all candidates are allowed to attend. A verbal test examination is held three weeks prior to the examinations, at which candidates must satisfy the teachers as to their knowledge before obtaining the necessary signatures to their schedules.

Special classes in advanced anatomy are conducted by the lecturers and demonstrators for the various University and the Fellowship of the College of Surgeons examinations. (Fee, see pp. 37, 38.)

PHYSIOLOGY.

DR. T. GREGOR BRODIE.

A systematic course of lectures to meet the requirements of the "Conjoint Board" is given throughout the Winter Session. As certain portions of the subject are dealt with more fully in some years than in others, students are recommended to attend the course both in the first and second years.

The lectures are supplemented by practical instruction, chiefly in Chemistry and Histology. This course is intended for students of the second year, and others preparing for the second "Conjoint" examination.

A course of practical instruction in Chemical Physiology is also given to students of the first year, in the second half of their first Winter Session.

Tutorial classes in Physiology are held by the Demonstrator prior to the January, March and July examinations of the "Conjoint Board."

A *special class* in advanced Physiology is provided for those preparing for University examinations (Cambridge, London, Oxford), or for the Fellowship of the College of Surgeons. This class, taken by the Lecturer twice weekly from January to July, includes exercise in the use of physiological apparatus and advanced practical instruction in histological and chemical methods. (Fee, see pp. 37, 38.)

Each member of the advanced class has a table, cupboard, and drawers provided for him. He is required to deposit 5s. for the key to same, the money being returned at the end of the course.

Each member of the advanced course must provide himself with a microscope, dissecting instruments, object-slides, cover-glasses, labels, and a small sketch-book. Chemicals, staining and mounting fluids, etc., are provided for him.

HISTOLOGY, with practical work (SUMMER SESSION).

The tissues and organs of the body are sytematically examined. Each Student is practically instructed in methods of preparing histological specimens.

Each Student must provide himself with the following :—

Microscope with two objectives ($\frac{2}{3}$ inch and $\frac{1}{6}$ inch foc. dist.), lifter for sections ; slides and covers ($\frac{1}{2}$ gross slides and $\frac{1}{2}$ of No. 2 $\frac{7}{8}$ circles), drawing book (4to.), 2 camel hair brushes, H.B. pencil and water colours, soft cloth for cleaning slides, &c. ; labels for slides ; box to hold 12 dozen specimens ; forceps, scalpel, fine scissors, and 6 large watch glasses. A table, cupboard and drawer, and chemicals, staining and mounting fluids, &c., are provided for him.

The Laboratory is open from 9 *to* 1 *and from* 2 *to* 5 *daily.*

PHARMACY, PHARMACOLOGY, AND THERAPEUTICS.

DR. MACKENZIE.

Lectures are given three times a week during the Summer Session, the course being specially adapted to the requirements of candidates for the examination of the "Conjoint Board."

This course embraces the physiological actions of the various medicinal agents on the healthy body, and on general morbid conditions.

Demonstrations are given in the Materia Medica Museum by Mr. White and two assistants.

PRACTICAL PHARMACY.—Instruction is given by the Hospital Pharmaceutist, Mr. E. White, B.Sc., to students requiring it. (Fee, see p. 37.)

Special classes are arranged to meet the requirements of—(*a*) the "Conjoint Board," (*b*) the intermediate M.B. of the University of London, (*c*) the first M.B. of Oxford and second of Cambridge.

MIDWIFERY AND DISEASES OF WOMEN.

DR. CULLINGWORTH.

A systematic course of lectures on Midwifery is delivered during the Summer Session, embracing the physiology and pathology of pregnancy, labour, and the puerperal state, preceded by an account of the anatomy and development of the female pelvis, and of the placenta and fœtal membranes.

A short course of Obstetric demonstrations on the model is given by Dr. Cory during the Winter Session.

A course of about twenty lectures on the Diseases of Women is delivered during the Winter Session. The lectures are partly systematic and partly clinical, the subjects varying from year to year.

A class is held by the Obstetric tutor for practical instruction in the mechanism and management of labour and the use of instruments. No student is allowed to attend maternity cases until he has attended this class.

Tutorial Classes are held prior to the January, April, and July Examinations of the "Conjoint Board." The Composition Fee provides for attendance on one series of these Classes only.

MEDICINE.

DR. PAYNE AND DR. SHARKEY.

A systematic course of lectures on the Principles and Practice of Medicine is given three times weekly during the Winter Session.

Clinical lectures on Medicine are given once weekly throughout the Academic year, by the physicians to the Hospital in rotation. The subject of each is advertised beforehand in the Hospital and Medical School.

PRACTICAL MEDICINE.

DR. MACKENZIE AND DR. TURNEY.

An elementary course of practical instruction in the means of physical diagnosis is held for about a month prior to each quarterly appointment of out-patient clinical clerks; no student can be appointed until he has attended this class, or an equivalent course elsewhere. Instruction is given in the principles and method of examination of the circulatory, respiratory, urinary, digestive, and nervous systems. Tutorial Classes are held prior to the January, April, and July Examinations of the "Conjoint Board." The Composition Fee provides for attendance on one series of these Classes only.

SURGERY.

MR. CLUTTON AND MR. PITTS.

A systematic course of lectures on General and Special Surgery is given three times weekly throughout the Winter Session. The subject, being too extensive for a six months' course, is completed in two Winter Sessions.

Clinical lectures on Surgery are given once weekly throughout the Academic year, by the surgeons to the Hospital in rotation. The subject chosen for each lecture is advertised beforehand in the Hospital and Medical School.

PRACTICAL SURGERY.

MR. MACKELLAR AND MR. BALLANCE.

During the Summer Session Mr. Ballance holds a class once a week, providing special instruction for students about to apply for Out-patient dresserships. It comprises bandaging, the treatment of wounds the use of

certain instruments and splints, and the demonstration of surgical landmarks on the living model. No student can be appointed a dresser until he has attended this class.

The Winter Course includes the diagnosis and treatment of fractures and dislocations, application of trusses and tourniquets, minor operations, treatment of hæmorrhage and surgical emergencies, and the completion of the Summer Course on instruments and applied anatomy.

The teachers of practical surgery are assisted by Demonstrators, who supervise the students after each lecture in the various manipulations on the living models provided.

Tutorial classes are held for six weeks prior to the January, April, and July examinations of the "Conjoint Board." These include general surgery, operative surgery, and surgical anatomy, by the teachers and Demonstrator of Practical Surgery; and surgical pathology, by Mr. Shattock. The Composition Fee provides for attendance on one series of these Classes only.

OPERATIVE SURGERY.

Classes are held by Mr. MacKellar previous to the January, April, and July examinations of the "Conjoint Board." The operations are performed by the students, subjects being provided at the expense of the school.

Special classes are held during the Summer Session and at other convenient times by Mr. Ballance and Mr. Battle, for students preparing for the higher examinations. The number of students to each subject is limited to two. (Fee, see p. 37.)

PATHOLOGY, PATHOLOGICAL ANATOMY, AND BACTERIOLOGY.

DR. HAWKINS AND MR. SHATTOCK.

A course of lectures on General Pathology, Surgical Pathology, and the diseases of special organs is given by Dr. Hawkins and Mr. Shattock throughout the Winter and Summer Sessions. Each lecture is followed by a demonstration, in which the main points are illustrated by microscopical and museum preparations. Illustrative sections for microscopical examination are given to each student for preparation and mounting.

Mr. Shattock's course of lectures deals with morbid growths, with the pathological questions touched upon in the systematic course of Surgery, and with Bacteriology.

The Demonstrator of Morbid Histology holds occasional classes, in which the microscopical preparations contained in the pathological cabinet are shown and explained.

Students are selected annually to assist the Demonstrator of Morbid Histology.

Post-mortem examinations are performed daily at 2 p.m. by Dr. Hawkins, Dr. Mackenzie, or Dr. Turney, and demonstrations given. Students are appointed to act as clerks, and are required to make examinations under the supervision of the demonstrators.

PRACTICAL BACTERIOLOGY.

A short course is given during May and June by Mr. Shattock. Fee, One Guinea, including materials.

FORENSIC MEDICINE AND TOXICOLOGY.

DR. CORY AND MR. MACKELLAR.

A three months' course of lectures is given during the Summer Session.

The Medical Section is taken by Dr. Cory.

The Surgical Section and Toxicology by Mr. MacKellar.

The lectures cover the synopses of the various Examining Boards, and are supplemented in the toxicological section by demonstrations by Dr. Crossley.

MENTAL DISEASES.

DR. RAYNER.

A three months' course of lectures is given during the Summer Session, comprising Symptomatology, Causation, States and Forms of Disease.

1. Mental Defects—Idiocy, Imbecility, etc.
2. Mental disorders—(*a*) States of Mental Depression, Melancholia, etc.; (*b*) States of Mental Exaltation, Mania, etc.; (*c*) States of Stupor; (*d*) States of Chronic Disorder, and Dementia.
3. Mental disorder in relation to diseases, causes, etc.
   (*a*) General paralysis, epilepsy, and other neuroses. (*b*) Insanities of puberty, adolescence, pregnancy, parturition and lactation; climacteric and senile insanities. (*c*) Insanities from injury, heat-stroke, fevers, etc. (*d*) Insanities from alcohol, lead, and other toxic agencies. (*e*) Insanity from gout, phthisis, and associated bodily diseases.
4. General Pathology.

Clinical Instruction is given by visits to Bethlem Hospital and other institutions for the Insane and Imbecile.

DISEASES OF THE EYE.

MR. LAWFORD.

A course of about thirty lectures on the principal disorders and diseases of the Eye and its appendages is given during the Winter Session. Patients are frequently shown, or illustrative cases described. A lecture or demonstration of cases is given weekly during the Summer Session.

An elementary class for learning the use of the Ophthalmoscope is held in October, January, and May. Ophthalmoscopic cases are shown once a week during the Winter Session.

Oral classes and demonstrations are held in connection with the Surgical tutorial classes for the examinations of the "Conjoint Board."

A Special Course of operations on the dead subject is given by Mr. Lawford. (Fee, see p. 37.)

PUBLIC HEALTH.

DR. SEATON.

A course of lectures is given during the Summer Session, including :—

Water, Air, Soil, Food, the Dwelling—in relation to Health and Disease—Infectious and Epidemic Diseases, the principles of preventive measures—Quarantine Isolation—Hospitals, temporary or permanent—Provisions of the Act for Notification of Diseases—The principles of Disinfection and the mode of action of the chief disinfecting agents—Vaccination—Statistics in relation to public health—Statutes relating to public health—The powers and duties of Sanitary Authorities and their officers—Construction and Ventilation of Sewers, methods of sewage disposal and purification—Trades regulated under the Public Health Acts.

The lectures are supplemented by Public Health demonstrations, relating to water supply, systems of sewage disposal and purification, establishment and arrangement of Isolation Hospitals, house drainage, &c.

Special Classes.—A six months' course of laboratory instruction for the various diplomas in public health is given by Dr. Seaton, Mr. Shattock, and Mr. Dunstan. (Fee, see p. 37.)

A shorter course of one or two months for students who do not need the above is also given. (Fee, see p. 37.)

DAYS AND HOURS OF LECTURES AND DEMONSTRATIONS.

WINTER SESSION.

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Years of Attendance
Elementary Biology	—	12	—	12	—	—	1st Year.
Physics, Chemistry & Practical Chemistry	12	—	—	—	10.30	10.30	do.
Descriptive and Surgical Anatomy...	—	9.30	—	9.30	—	9.30	do.
	9.30	—	9.30	—	9.30	11	2nd Year.
Anatomical Demonstrations	10½–4½	10½–4½	10½–4½	10½–4½	10½–4½	10½–1	1st & 2nd.
Physiology	10.45	—	10.45	10.45	—	—	do.
Physiological Demonstrations — Jan., Feb., Mar.,	—	—	9.30	—	9.30	—	1st Year.
Oct. to Mar.	—	12	—	—	12	—	2nd Year.
Practical Surgery ..... Oct., Nov., Dec.	—	—	9	—	—	—	3rd Year.
Comparative Anatomy (six lectures)	—	—	11	—	—	—	3rd Year.
Medicine — 1st and 3rd six weeks	—	4	—	4	4	—	do.
2nd and 4th six weeks	12.30	—	12.30	4	—	—	
Surgery	9	—	—	9	—	9	do.
Bacteriology and Surgical Pathology	—	—	—	12.30	12	—	do.
Diseases of Women..... Jan., Feb., Mar.	—	—	9	—	9	—	3rd or 4th.
Pathological Anatomy (Practical)	—	—	—	—	—	11½–1½	do.
Diseases of the Eye... Oct., Nov., Dec.	5	—	—	—	5	—	do.
Jan., Feb., Mar.	—	—	—	—	5	—	do.
Obstetric Demonstrations (six)	—	—	4	—	—	—	do.

SUMMER SESSION.

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Years
Botany	—	10	10	—	—	—	1st Year.
Elementary Biology	2	—	2	—	—	—	do.
Practical Pharmacy (Demonstration)	—	—	—	12	—	—	do.
Chemistry and Practical Chemistry	11—1	—	—	—	11—1	9½–11½	do.
Practical Physiology	—	10—1	10—1	10—1	—	—	do.
Anatomical Demonstrations	11—4	11—4	11—4	11—4	11—4	11—1	2nd Year.
Midwifery	—	9	9	9	9	—	do.
Comparative Anatomy (six lectures)	—	—	—	—	2	—	do.
Practical and Manipulative Surgery	9	—	—	—	—	—	do.
Pathological Anatomy	—	—	12	—	12	—	3rd Year.
Do. Demonstration	—	—	—	—	—	11	do.
Forensic Medicine	—	4	—	4	—	9	do.
Mental Diseases	—	—	—	12.30	—	—	do.
Public Health and Sanitary Science	12	—	—	—	—	—	do.
Pharmacology and Therapeutics	—	—	4.30	—	4.30	12	do.
Diseases of the Eye	—	—	—	—	5	—	3rd or 4th.
Practical Bacteriology (six meetings)	—	—	—	12	—	—	do.

The times of delivery of the Clinical Lectures are arranged, in accordance with other work, in the course of the Session.

SCHOLARSHIPS, PRIZES, APPOINTMENTS, & HONORARY DISTINCTIONS.

OPEN SCHOLARSHIPS IN NATURAL SCIENCE.

As an inducement to the study of Natural Science before the commencement of the strictly Medical Course, two Scholarships, of the value of £150 (*i.e.*, a free admission) and £60 respectively, are awarded annually, after an examination in Physics, Chemistry, and either Botany, Zoology or Physiology, at the option of Candidates. The Medical School Committee is empowered to grant an Exhibition of £20 to any *unsuccessful* competitor who obtains sufficient marks to qualify for a Scholarship.

These Scholarships are open to all Students not exceeding 24 years of age who have passed a recognised Preliminary Examination in Arts, and have not yet attended Lectures on Anatomy of the first year, without any condition as to their becoming Students of the Hospital, except in the case of successful Candidates, who must enter at once as "Perpetual" Pupils. The Examination will be conducted by means of written papers and practical work, and will be held on the 26th, 27th, and 28th of September, 1895. The standard, so far as the subjects are the same, will be that of the Preliminary Scientific Examination for Honours of the University of London. Competitors are required to send in their names with choice of optional subject and Certificate of Birth and of Preliminary Examination to the Medical Secretary not later than September 19th.

SCHOLARSHIP IN ANATOMY, PHYSIOLOGY & CHEMISTRY.

A Scholarship of the value of £50 will be offered for competition in the last week of September. It is open to Students who have completed their examinations in Anatomy, Physiology, and Materia Medica and Pharmacy for a Medical Degree in any of the Universities of the United Kingdom, and have not entered as Students in any London Medical School.

THE WILLIAM TITE SCHOLARSHIP.

This Scholarship, founded by the late Sir W. TITE, C.B., M.P., F.R.S., of the value of £27 10*s*., is awarded each year to the Student placed highest in the 1st Class List in the examinations at the end of the first Winter Session. Preference, in case of equality between Students, is to be given to the son of a medical man, and more particularly of one who has been educated at St. Thomas's Hospital or is in Practice in Bath.

THE MUSGROVE SCHOLARSHIP.

This Scholarship, founded by Sir JOHN MUSGROVE, Bart., the late President of the Hospital, of the value of £38 10*s*., is awarded biennially to the Student who shall take the highest place in the 1st Class List in the examinations at the end of the Second Winter Session. It is tenable for two years, provided the holder obtains a place in the 1st Class in the Examinations at the end of the third winter.

THE PEACOCK SCHOLARSHIP.

This Scholarship, founded by the will of the late Dr. THOMAS BEVILL PEACOCK, for many years Physician, and at the time of his death Consulting Physician to St. Thomas's Hospital, is of the same value as the Musgrove Scholarship ; is awarded and held upon the same terms ; and is given every second year in alternation with that Scholarship.

THE BEANEY SCHOLARSHIP.

This Scholarship, founded by the will of the late Dr. BEANEY, of the value of £52 10*s*., is awarded biennially, after an examination in Surgery and Surgical Pathology, to a student who shall have completed his fifth but not his seventh year. The examination is held during the Summer Session.

THE SALTERS' COMPANY RESEARCH FELLOWSHIP.

This Fellowship of the annual value of £100 has been established and endowed by the Salters' Company, with a view to the promotion of research

in Pharmacology. The Fellowship is awarded to a properly qualified person by the Company on the nomination of the Treasurer of St. Thomas's Hospital and a Committee of Selection. It may be held for a term of three years, the Fellow carrying on his researches at St. Thomas's Hospital and giving annual evidence of the performance of satisfactory work to the Committee of Selection. The Fellow is required to devote his whole time to research and to hold no other office or appointment except by special permission of the Salters' Company, granted on the strong recommendation of the Committee of Selection.

PRIZES.

The following Scholarships, Prizes, and Medals, will be offered for Competition during the year 1895-1896 :—

TWO OPEN SCHOLARSHIPS IN NATURAL SCIENCE of the value of £150 and £60 respectively, at the commencement of the 1st year.

ONE OPEN SCHOLARSHIP IN ANATOMY, PHYSIOLOGY AND CHEMISTRY of the value of £50, at the commencement of the 3rd year.

AT THE END OF FIRST YEAR.

Winter.	1st. ...	The William Tite Scholarship	£27 10s.
	2nd. ...	College Prize	£20.
	3rd. ...	Ditto	£10.
Summer.	1st. ...	College Prize	£15.
	2nd. ...	Ditto	£10.

SECOND YEAR.

Winter.	1st. ...	The Peacock Scholarship	£38 10s.
	2nd. ...	College Prize	£20.
	3rd. ...	Ditto	£10.
Summer.	1st. ...	College Prize	£15.
	2nd. ...	Ditto	£10.

THIRD YEAR.

		Second Tenure of the Musgrove Scholarship (if holder obtains 1st Class in this examination) ...	£38 10s.
Winter.	1st. ...	College Prize	£20.
	2nd. ...	Ditto	£15.
	3rd. ...	Ditto	£10.
Summer.	1st. ...	College Prize	£15.
	2nd. ...	Ditto	£10.

Students of each year are classed according to their respective merits in the examinations, and those in the *first* class in each year receive Certificates of Honour, and a preference in the selection for Hospital Appointments.

Free Scholarships are given to distinguished Pupils of Merchant Taylors' and City of London Schools, and Epsom College.

In addition there are awarded—

THE CHESELDEN MEDAL, *Annually.*
THE MEAD MEDAL, *do.*
THE SOLLY MEDAL AND PRIZE, *Biennially.* (1896.)
THE BEANEY SCHOLARSHIP, *do.* (1896.)
THE GRAINGER TESTIMONIAL PRIZE, *Annually.*
THE TREASURER'S GOLD MEDAL, *do.*
THE BRISTOWE MEDAL, *do.*

Intending Competitors, especially those who have spent a part of their curriculum elsewhere, should apply to the Medical Secretary for detailed regulations.

The CHESELDEN MEDAL, founded by the late GEORGE VAUGHAN, Esq., is annually awarded to the Fourth Year's Student who most distinguishes himself in respect of a Special Practical Examination in Surgery and Surgical Anatomy.

The MEAD MEDAL, founded by Mr. and Mrs. NEWMAN SMITH, is awarded annually to a Fourth Year's Student, in respect of a Special Practical Examination in Medicine, Pathology and Hygiene.

The SOLLY MEDAL, together with a Prize in Money, will be awarded biennially. Those Students are eligible to compete who shall be of from three to six years' standing. The award is made for the best series of Reports of Surgical cases coming under the Student's personal observation in the Wards, not, however, to exceed ten in number.

The BRISTOWE MEDAL will be awarded annually in respect of a special Practical Examination in Pathology and Morbid Anatomy.

The GRAINGER TESTIMONIAL PRIZE, of the value of Fifteen Pounds, is awarded annually for work in Anatomy and Physiology. The conditions of competition for this Prize have recently been altered, and can be learnt from the Medical Secretary.

The TREASURER'S GOLD MEDAL for General Proficiency and Good Conduct, is awarded at the end of the 4th Winter Session to the Student who has passed through his pupilage in St. Thomas's Hospital in the most meritorious manner.

APPOINTMENTS.*

A RESIDENT ASSISTANT PHYSICIAN and a RESIDENT ASSISTANT SURGEON, at a salary of £100 per annum each, are from time to time appointed. The appointments are annual, but the tenure of office may be renewed for a term not exceeding three years.

TWO HOSPITAL REGISTRARS, at an annual Salary of £100 each, are appointed in each year. They are eligible for annual re-appointment, but may not hold office for more than five years. Preference will be given to Gentlemen who have been distinguished for merit, and have completed their studies in the School. The payment of the Registrars is subject to the presentation of a Report upon the Practice of the Hospital, and to such Report being regarded as satisfactory by the Medical Officers to whom it shall have been referred.

AN OBSTETRIC TUTOR AND REGISTRAR is appointed each year, at an annual salary of £50. He is eligible for annual reappointment, but may not hold office for more than five years consecutively. The holder of the office takes part in the tutorial instruction of students, under the direction of the Obstetric Physician.

House Appointments, open to Students who have obtained their diplomas.

(*The duties of these offices commence on the first Tuesday in March, June, September, and December.*)

Four HOUSE PHYSICIANS, Four HOUSE SURGEONS, and Four ASSISTANT HOUSE SURGEONS, are selected every three months. Two of the House Physicians and the Assistant House Surgeons are non-resident, but the other Officers are provided with Rooms and Commons in the Hospital, free of expense.

A SENIOR and JUNIOR OBSTETRIC HOUSE PHYSICIAN are selected every three months. The former is provided with Rooms and Commons in the Hospital, free of expense. The latter is provided with Commons, and must live near the Hospital.

Two OPHTHALMIC HOUSE SURGEONS are appointed for six months, one of whom receives a Salary at the rate of £50 per annum, and the other is provided with Commons. They must live near the Hospital.

CLINICAL ASSISTANTS in the Departments for Diseases of the Throat, Skin, and Ear, and in the Electrical Department, are appointed every three months.

In the Special Departments preference is given to those who have worked in a satisfactory manner therein as Clinical Clerks and Dressers.

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* All these Appointments are open to Students without extra payment.

Appointments for Un-qualified Students.

CLINICAL CLERKS and DRESSERS to In-patients are selected to the number of at least 100 each year, from amongst the most eligible pupils. The DRESSER on Accident Duty is provided with a Room and Commons in the Hospital. CLINICAL CLERKS and DRESSERS for the Out-patients are also appointed, to the number of at least 80 to 100 each year; applicants are required to have passed the 2nd examination of the Conjoint Board, or an equivalent examination, and to have attended a course of instruction in Elementary Clinical Medicine (p. 25). (*The Duties commence on the first Tuesday in January, April, July, and October.*)

OBSTETRIC CLERKS are appointed, in rotation, from a list of Students who have entered their names for the purpose, have attended Lectures on Midwifery and a course of Practical Obstetrics, and have passed the "Second Conjoint," or an equivalent Examination. Each Clerk holds office for three weeks, and Special Certificates are awarded to those Gentlemen who have satisfactorily attended Sixty Maternity cases. About 50 Obstetric Clerks are appointed yearly.

ASSISTANTS TO THE TEACHERS OF PRACTICAL AND MANIPULATIVE SURGERY are appointed for the Winter and Summer Sessions.

ASSISTANTS TO THE LECTURER ON MATERIA MEDICA are appointed for the Summer Session.

Students are appointed to act as ASSISTANTS to the DEMONSTRATORS of MORBID HISTOLOGY and of MORBID ANATOMY.

ASSISTANTS IN THE CHEMICAL DEPARTMENT are selected from those who have passed the PREL. SCI. UNIV. LOND. or who are similarly qualified.

ASSISTANTS IN THE PHYSIOLOGICAL LABORATORY are selected from Students who have completed their Second Winter Session.

ANATOMICAL REGISTRARS and PROSECTORS are appointed in the early part of the Winter Session, also ASSISTANTS TO THE TEACHER OF ELEMENTARY BIOLOGY.

REGULATIONS FOR THE EXAMINATION AND CLASSIFICATION OF THE STUDENTS AT THE MEDICAL SCHOOL.

1. In accordance with the Regulations of the Qualifying Bodies, Students must attend the Class Examinations in the subjects for which they have to be certified, and show by their answers to the questions that they have paid proper attention to the Lectures, otherwise the signature to their Schedules may be withheld.

2. There shall be held at least two Examinations in each Winter and one in each Summer Session in each subject on which attendance is required during that Session, and the marks obtained in these Examinations shall be the basis for the Classification of Students and the Award of Prizes for each Session respectively. Provided that any extra Examination in the course of the Session, in any subject, be not allowed to interfere with the ordinary Lectures in other subjects.

3. The number of marks allotted to each subject in the following Schedule is not to be exceeded in case the number of Examinations held during the Session be more than two, but must be distributed amongst the several Examinations.

1st YEAR'S SUBJECTS.

WINTER ...	Anatomy	500
	Practical Anatomy	300
	Physiology	300
	Elementary Biology ...	300
	Chemistry and Practical Chemistry	600
	Total	2000
SUMMER ...	Chemistry and Practical Chemistry	300
	Practical Pharmacy... ...	200
	Practical Physiology ...	300
	Total	800

2nd YEAR'S SUBJECTS.

WINTER ...	Anatomy	500
	Practical Anatomy	300
	Physiology	600
	Practical Physiology ...	200
	Total	1600
SUMMER ...	Midwifery	500
	Practical Surgery	200
	Total	700

3rd YEAR'S SUBJECTS.

WINTER ...	Medicine	650	SUMMER ...	Forensic Medicine	200
	Surgery	650		Pathological Anatomy ...	350
	Practical Surgery	300		Pharmacology and Therapeutics...	250
	Total	1600		Mental Diseases and Public Heath...	200
				Total	1000

4. Students must obtain at least one-third of the total number of marks in each subject, and not less than two-thirds of the total number allotted to all the subjects collectively, to be placed in the 1st Class.

Those who have obtained one-third of the total number of marks allotted to all the subjects collectively are placed in the 2nd Class.

The names of those who do not obtain either a 1st or 2nd Class position are not published, but a General List showing the exact position of each Student at every Examination is kept by the Secretary, from whom any Student can learn his own position, but no Lecturer shall make known to Students the number of marks obtained by any Student in any subject.

5. The Prizes shall be awarded to the Students holding the 1st, 2nd, and 3rd positions in the 1st Class of each Winter Session, and to those holding the 1st and 2nd positions of the 1st Class in each Summer Session.

6. The number of marks allotted to the Examinations for the MEAD and CHESELDEN Medals shall be 600 each.

7. In awarding the TREASURER'S Medal the number of marks obtained at the Sessional Examinations and in the MEAD and CHESELDEN Examinations shall be counted, provided that, as regards the Examination for the Medals, two-thirds of the maximum marks be obtained, but those obtained in the Entrance Scholarship Competition shall not be included.

8. The Authorities reserve the right of withholding any prize, if no competitor of sufficient merit present himself.

Distribution of Prizes for the Past Sessions.

SUMMER SESSION, 1894.

FIRST YEAR'S STUDENTS.

H. E. HEWITT, *Sutton, Surrey* ... ... — College Prize, £15, and Certificate of Honour.

R. W. C. PIERCE, *Llandudno* ... ... — College Prize, £10, and Certificate of Honour.

H. D. SINGER, *Stoke Newington* ... ... — Certificate of Honour.

J. F. MCCLEAN, *West Square* ... ... — Certificate of Honour.

H. H. SCOTT, *Sydenham* ... ... — Certificate of Honour.

J. A. BARNES, *Claverton Street* ... ... — Certificate of Honour.

SECOND YEAR'S STUDENTS.

S. N. BABINGTON, *Reading* ... ... — College Prize, £15, and Certificate of Honour.

THIRD YEAR'S STUDENTS.

J. C. HARCOURT, *Woodford Green* ... ... — College Prize, £15, and Certificate of Honour.

WINTER SESSION, 1894–5.

ENTRANCE SCIENCE SCHOLARSHIPS.

J. GAFF, *Kennington Road* ... ... — **First Scholarship, £150,** and Certificate of Honour.

H. R. BEALE, *Finborough Road* ... ... — **Scholarship, £60,** and Certificate of Honour.

H. CALVERT, *Rochdale* ... ... — **Exhibition of £20,** and Certificate of Honour.

UNIVERSITY SCHOLARSHIP.

W. MCDOUGALL, *Didsbury* .. .. — **Scholarship, £50,** and Certificate of Honour.

FIRST YEAR'S STUDENTS.

J. GAFF, *Kennington Road* ... ... — **The Wm. Tite Scholarship, £27 10s.,** and Certificate of Honour.

H. R. BEALE, *Finborough Road* ... ... — **College Prize, £20,** and Certificate of Honour.

H. CALVERT, *Rochdale* ... ... — **College Prize, £10,** and Certificate of Honour.

H. T. D. ACLAND, *Hyde Park Gardens* ... — Certificate of Honour.

A. E. SOFTLY, *Worthing* ... ... — Certificate of Honour.

T. PERRIN, *Seaton* ... ... — Certificate of Honour.

A. BEVAN, *Elm Park Gardens* ... ... — Certificate of Honour.

H. H. R. CLARKE, *Wimbledon* ... ... — Certificate of Honour.

SECOND YEAR'S STUDENTS.

H. E. HEWITT, *Sutton, Surrey* ... ... — **The Musgrove Scholarship, £38 10s.,** and Certificate of Honour.

R. W. C. PIERCE, *Llandudno* ... ... — **College Prize, £20,** and Certificate of Honour.

H. D. SINGER, *Stoke Newington* ... ... — **College Prize, £10,** and Certificate of Honour.

H. H. SCOTT, *Sydenham* ... ... — Certificate of Honour.

S. A. LUCAS, *Tunbridge Wells* ... ... — Certificate of Honour.

G. B. THWAITES, *Croydon* ... ... — Certificate of Honour.

THIRD YEAR'S STUDENTS.

A. W. SIKES, *Garrycloyne, Blarney* ... ... — **College Prize, £20,** and **2nd Tenure of Peacock Scholarship,** and Certificate of Honour.

PRACTICAL MEDICINE.

F. B. THORNTON, *Leicester* ... ... — **The Mead Medal,** founded by Mr. and Mrs. NEWMAN SMITH.

P. S. HICHENS, *Canterbury* ... ... — Certificate of Honour.

SURGERY AND SURGICAL ANATOMY.

B. DYBALL, *Reigate* ... ... — **The Cheselden Medal,** founded by the late GEORGE VAUGHAN, Esq.

A. J. MARTINEAU, *Lupus Street* ... ... — A Bronze Medal.

PATHOLOGY AND MORBID ANATOMY.

A. L. HOME, *Hampstead* ... ... — **The Bristowe Medal.**

G. G. GENGE, *Croydon* ... ... — Certificate of Honour.

FOR GENERAL PROFICIENCY AND GOOD CONDUCT.

A. J. MARTINEAU, *Lupus Street* ... ... — **The Treasurer's Gold Medal.**

CERTIFICATES OF HONOUR.

HOUSE PHYSICIANS.

R. E. Nix	T. G. Nicholson	*Non-Resident*
A. M. Collcutt	A. S. F. Grunbaum	*Non-Resident*
E. A. Saunders	F. J. Brakenridge	*Non-Resident*
G. G. Genge	J. W. Laver	*Non-Resident*

HOUSE SURGEONS.

H. A. Dickson	G. J. Arnold
L. J. Miskin	R. Fox Symons
A. W. Cuff	A. E. Russell
W. J. C. Merry	H. W. Harding

ASSISTANT HOUSE SURGEONS.

L. J. Miskin	A. E. Russell
A. W. Cuff	H. W. Harding
G. J. Arnold	E. O. Thurston
R. Fox Symons	A. L. Home

OBSTETRIC HOUSE PHYSICIANS.

Senior—C. S. Jaffé	*Junior*—P. C. Fenwick
P. C. Fenwick	E. G. E. Arnold
E. G. E. Arnold	W. E. F. Tinley
W. E. F. Tinley	S. W. F. Richardson

OPHTHALMIC HOUSE SURGEON.

H. G. Toombs

CLINICAL ASSISTANTS IN THE SPECIAL DEPARTMENTS.

Throat	Skin	Ear
F. E. Appleyard	J. W. Laver	L. A. R. Wallace
A. F. W. King	H. H. Haward	
T. O. Halliwell		

CERTIFICATES OF PROFICIENCY.

ANATOMICAL REGISTRARS.

J. P. Scatchard	A. W. Sikes

PROSECTORS.

H. E. Hewitt	R. W. C. Pierce
G. D. Howlett	H. H. Scott
J. F. McClean	H. D. Singer

ASSISTANTS IN THE PHYSIOLOGICAL LABORATORY.

S. N. Babington	A. Osborne
W. G. Bennett	C. P. Lankester
W. J. Fanning	

PATHOLOGICAL ASSISTANTS.

E. H. Cobb	P. S. Hichens
E. L. Collis	E. H. T. Nash
J. S. Fairbairn	F. B. Thornton

The following Distinctions in the University of London have been obtained by Students of St. Thomas's Hospital during the past year :—

HONOURS EXAMINATIONS—UNIV. LOND.

Gold Medal (M.D.), Mr. S. G. Toller.

Scholarship and Gold Medal in Surgery (B.S.), First Class in Medicine, Second Class in Obstetric Medicine (M.B.), Mr. J. H. Fisher.

Gold Medal in Medicine, Second Class in Obstetric Medicine (M.B.), Mr. A. E. Russell.

Gold Medal in Obstetric Medicine, Third Class in Medicine (M.B.), Qualified for Gold Medal in Surgery (B.S.), Mr. C. S. Wallace.

Second Class in Medicine (M.B.), Mr. E. Smith and Mr. E. M. Hainworth.

First Class in Surgery (B.S), Mr. S. W. F. Richardson.

Exhibition and Gold Medal in Organic Chemistry, Second Class in Physiology, Third Class in Anatomy and in Materia Medica (Intermed. M.B.), Mr. A. W. Sikes, B.Sc.

Third Class in Organic Chemistry (Prel. Sci.), Mr. J. Gaff.

FEES FOR ATTENDANCE ON THE LECTURES

AND ON THE

PRACTICE OF THE HOSPITAL.

COMPOSITION FEES.

The Composition Fee* to Hospital Practice and Lectures may be paid in the following ways:

1st. One Hundred and Fifty Pounds on entrance in one sum;

2nd. One Hundred and Fifty-seven Pounds Ten Shillings in instalments;

(*a*) By two payments, £85 on entrance, and £72 10s. at the beginning of the second year;

(*b*) By three payments, £75 at the beginning of the first year, £50 at the beginning of the second year, and £32 10s. at the beginning of the third year;

(*c*) By four payments, £65 at the beginning of the first year, £50 at the beginning of the second year, £30 at the beginning of the third year, and £12 10s. at the beginning of the fourth year.

Gentlemen entering at St. Thomas's for Lectures and Hospital Practice of the second and subsequent years pay £130 on entrance, or three instalments of £52 10s., £42, and £42 (see pages 18 and 19). Students entering for Lectures and Hospital Practice of third and subsequent years (see page 19) pay a composition fee of £80, or £52 10s. on entrance, and £31 10s. one year subsequently.

The Fee for attendance on the *general* subjects required of Students in Dental Surgery, is for the two years, £65, or by instalments, £55 for the first year, and £15 for the second year. If certificates for *Dental* practice are also required, the special fee for that subject (page 37) has to be paid.

[N.B.—It should be understood that although the Composition Fees are intended to cover unlimited attendance on Lectures and Hospital Practice, yet if a student fail to pass the several professional examinations within periods deemed reasonable by the School authorities, he may be required to pay additional fees for attendance at practical Courses and Tutorial Classes, or his rights as a Student may be suspended or determined at any time by the School Committee, with the approval of the Treasurer.]

Legally qualified Medical Practitioners are admitted to the Hospital practice, and to the Lectures and Library, on payment of a fee of £15 15s. for unlimited attendance; but are not entitled to receive certificates for such attendance without payment for the special certificates required (see p. 37).

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* Students who have commenced the study of the Profession otherwise than by attendance at a Medical School, will be considered to be first year's Students, on joining the Medical School, but a deduction from the Composition Fee will be allowed in such cases.

NOTE.—Cheques may be made payable to the Medical Secretary, and crossed "London and County Bank, Lambeth."

The Courses may be attended separately on the following terms, which entitle to Certificates for such Attendances.

For the Medical and Surgical Practice, including Clinical Lectures and the Special Departments.

Three months	£21.	Twelve months... ...	£36 15*s*.
Six months	£26 5*s*.	Unlimited	£73 10*s*.

The Practice of the Medical or Surgical Wards, or any one of the Special Departments, may be attended separately.

	Medical or Surgical.	*Each Special Department.*
Three months	£15 15*s*. ...	£5 5*s*.
Six months	£21. ...	£10 10*s*.
Twelve months	£26 5*s*. ...	£15 15*s*.

Lectures and Demonstrations.

Anatomy, Physiology ... ... each	£10 10*s*.
Practical Anatomy (twelve months), Practical Physiology, including Histology ... ... each	£10 10*s*.
Medicine, Surgery, Chemistry ... ... ,,	£7 7*s*.
Midwifery	£6 6*s*.
Pharmacology and Therapeutics, Physics, Forensic Medicine each	£5 5*s*.
Pathology, including Pathological Histology	£8 8*s*.
Diseases of Women, Public Health, Insanity, Diseases of the Eye ... ... each	£3 3*s*.
Practical Medicine, Practical Obstetrics, Laryngology ... ,,	£3 3*s*.
Practical Surgery, Practical Chemistry, Elementary Biology ,,	£6 6*s*.
Demonstrations in Post-Mortem room (twelve months)	£10 10*s*.

NOTE.—A small charge for materials is made for all Practical Courses taken separately.

SPECIAL COURSES (not included in the Composition Fee) and EXTRA EXPENSES.

Comparative Anatomy	£2 2*s*.
Botany	£3 3*s*.
Operative Surgery	£5 5*s*.
Ditto of Eye	£2 2*s*.
Advanced Anatomy, Advanced Physiology ... ... each	£6 6*s*.
Public Health—Six months' Laboratory Instruction for the Diploma	£21.
Ditto Short Course	£6 6*s*.
Practical Bacteriology	£1 1*s*.
Vaccination	£1 1*s*.
Practical Instruction in Pharmacy	£3 3*s*.
Attendance at a Fever Hospital of the Metropolitan Asylums Board	£3 3*s*.
Attendance at a recognised Lunatic Asylum	£3 3*s*.

Students who pay a Composition Fee are now supplied with chemicals and materials for one course of Practical Chemistry, Practical Physiology, and Elementary Biology without extra charge, but there are certain instruments and materials required during the course of study, as follows, viz. :

Those attending Elementary Biology, Practical Physiology and Physiological Demonstrations must provide themselves with Microscopes.

Students Dissecting pay for the "parts" they dissect at fixed rates, which are notified in the Library.

Each Clinical Clerk must provide himself with a Stethoscope and Registering Clinical Thermometer. Each Dresser is required to have a Registering Clinical Thermometer, a Pocket Case of Instruments, and a Case of Silver or Plated Catheters.

UNIVERSITY OF LONDON.

Preliminary Scientific and Intermediate M.B. Classes.

PRELIMINARY SCIENTIFIC EXAMINATION.

Special instruction in the subjects required for this Examination is given in the form of (*a*) Lectures and (*b*) Classes, from October to July.

		Mon.	Tues.	Wed.	Thu.	Fri.	Sat.
Botany. A. W. BENNETT, M.A.	Lectures (Summer)	—	10.0	10.0	—	—	—
	Classes (Winter & Summer)	—	—	11.0	—	—	—
Chemistry. W. R. DUNSTAN, M.A., F.R.S.	Lectures (Winter)	12.0	—	—	—	1030	—
	Classes (Summer)	—	—	—	1130	—	1145
	Practical (Winter)	—	2.0	—	—	—	1030 fmJan
	,, (Summer)	11.0	—	—	—	12.0	9.30
		Laboratory open daily					
Physics. W. R. DUNSTAN, M.A., F.R.S., and H. R. LESUEUR, B.Sc.	Lectures and Practical Work (Winter)	—	—	9.30	—	1130 fmJan	1030
	Practical Work (Summer)	—	—	9.0	9.0	—	—
Zoology. F.G. PARSONS, F.R.C.S.	Classes (Winter)	—	—	1.30	—	—	—
	,, (Summer)	9.30	—	—	1030	—	—
				Laboratory open daily			

N.B.—A Microscope and simple Dissecting Apparatus must be provided by each Member of the Class, and Two Guineas are charged for materials.

Fee, inclusive of Practical Chemistry ... ... *Sixteen Guineas.*

Fee for any single subject ... ... *Five Guineas.*

Subsequent Courses, half Fee, if recommended by the respective Teachers.

In the Practical Classes of Botany and Zoology, each Student has the opportunity of dissecting the chief types.

INTERMEDIATE EXAMINATION IN MEDICINE.

		Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
Anatomy. G. H. MAKINS, F.R.C.S., and H. B. ROBINSON, M.S.	Jan. to Mar.	—	9.30	—	9.30	—	—
	May to July	12.45	10.0	12.45	—	10.0	— Practical
Physiology & Histology T. GREGOR BRODIE, M.D. Lond.	Jan. to Mar.	—	10.45	—	—	10.45	9.30 Practical
	May to July	11.0	—	—	—	11.0	9.30
Organic Chemistry. W. R. DUNSTAN, M.A., F.R.S.	Oct. to Mar.	—	—	—	2.0 3—4.30 Practical work	2 0 after Jan.	—
	May to July	—	2.0 Practical work at 3	3.0	3.0 Practical work	—	—
Materia Medica and Pharm. Chemistry. E. WHITE, B.Sc.	May to July	—	—	2.0	—	—	—

Fee to Students of the Hospital, inclusive of Organic Analysis and Chemicals* ... ... *Nine Guineas.*

To others ditto ... ... *Twelve Guineas.*

Fee for any Single Subject ... ... *Three Guineas.*

Subsequent Courses, half Fee, if recommended by the respective Teachers (except Chemicals, for which full fee is charged).

* Instruction and Practice in Organic Analysis is essential for this Examination.

NOTE.—Private Classes are held for the Final M.B. Examination.

St. Thomas's Hospital.

MEDICAL AND PHYSICAL SOCIETY.

President, 1895—96.
DR. MACKENZIE.

Vice-Presidents.

DR. ACLAND.	DR. HAWKINS.	DR. ORD.
MR. ANDERSON.	MR. LAWFORD.	MR. ROBINSON.
MR. BALLANCE.	MR. MACKELLAR.	MR. SHATTOCK.
DR. CULLINGWORTH.		

Treasurer.—MR. G. S. SAUNDERS.

Hon. Secretaries.

MR. M. A. TEALE. MR. A. W. TUKE.

Committee.

MR. M. A. TEALE.	MR. A. W. TUKE.	MR. C. G. SELIGMANN.
MR. E. A. SAUNDERS.	MR. R. S. RANSOME.	MR. J. F. MCCLEAN.
MR. P. L. BLABER.	MR. J. P. SCATCHARD.	MR. E. A. GATES.
MR. A. L. HOME.		

This Society was originated in the early part of the present century by students of the Hospital, and has for its object the reading and discussion of papers on Medicine, Surgery, and subjects of General Interest, the narration of cases, and the exhibition of specimens of Physiological and Pathological interest. The Meetings are held in the Library on alternate Thursdays at 8.30 p.m., and terminate not later than 10 p.m.

Further information can be obtained of the Hon. Secretaries.

ST. THOMAS'S HOSPITAL REPORTS.

VOL. XXIV., NEW SERIES,

EDITED BY

T. D. ACLAND, M.A., M.D. OXON, and
B. PITTS, M.A., M.C. CANTAB.

Will be Published in due Course.

It will contain contributions from Members of the Staff and others, together with the Statistical Reports of the Hospital, by the Medical and Surgical Registrars, to December 31st, 1895.

The New Series commenced in 1870, and complete Sets may still be had.

Intending Subscribers are requested to communicate with MR. G. RENDLE, the Secretary of the Medical School, at the Hospital, to whom P.O. Orders on the Westminster Bridge Office are to be made payable.

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To Subscribers in Great Britain and Countries within the Postal Union ...	6*s.* 0*d.*
To Non-Subscribers do. do. do ...	8*s.* 6*d.*

MEDICAL SCHOOL, WITH RECENT ADDITIONS, NORTH VIEW.

SEPTEMBER, 1895.

1	S	Twelfth Sunday after Trinity.
2	M	
3	Tu	House Officers, &c., commence duty.
4	W	Last day for applications for Clinical Clerkships and
5	Th	[Dresserships.
6	F	
7	S	
8	S	Thirteenth Sunday after Trinity.
9	M	
10	Tu	
11	W	
12	Th	
13	F	
14	S	
15	S	Fourteenth Sunday after Trinity.
16	M	
17	Tu	
18	W	Meeting to appoint Clinical Clerks and Dressers.
19	Th	
20	F	
21	S	St. Matthew.
22	S	Fifteenth Sunday after Trinity.
23	M	Last day for Entry for B.Sc. Exam., Univ. Lond.
24	Tu	
25	W	
26	Th	
27	F	
28	S	
29	S	Sixteenth Sunday after Trinity. Michaelmas Day.
30	M	Last day for Essay for Grainger Prize.

Preliminary Examination in Arts of the Society of Apothecaries held this month.
The Hospital Entrance Scholarships Examination takes place during the last week of this month.

OCTOBER, 1895.

1	Tu	Clinical Clerks and Dressers commence duty.
2	W	Distribution of Prizes, 3 P.M. Annual Dinner.
3	Th	
4	F	Meeting of Library Committee.
5	S	
6	S	Seventeenth Sunday after Trinity.
7	M	
8	Tu	
9	W	
10	Th	
11	F	
12	S	
13	S	Eighteenth Sunday after Trinity.
14	M	
15	Tu	
16	W	
17	Th	
18	F	St. Luke.
19	S	
20	S	Nineteenth Sunday after Trinity.
21	M	Univ. Lond. B.Sc. Exam.
22	Tu	
23	W	
24	Th	
25	F	
26	S	
27	S	Twentieth Sunday after Trinity.
28	M	Univ. Lond. M.B. Exam. St. Simon and St. Jude.
29	Tu	
30	W	
31	Th	

The Registration and Museum Committees meet during this month.

The Primary Examination of the Society of Apothecaries is held Quarterly, in the months of October, January, April, and July. The Final is held monthly; the Surgical part commences on the second Wednesday, and the Medical on the Monday following.

First, Second, and Third Examinations of the Examining Board in England are held this month.

NOVEMBER, 1895.

1	F	All Saints.
2	S	*Notice*—30th, last day for applications for Medical and [Surgical Registrarships.
3	S	Twenty-first Sunday after Trinity.
4	M	Entry for M.D. and M.S. Exams. Univ. Lond.
5	Tu	
6	W	Last day for applications for House Offices, &c.*
7	Th	
8	F	
9	S	Prince of Wales born, 1841.
10	S	Twenty-second Sunday after Trinity.
11	M	
12	Tu	
13	W	Meeting to appoint House Officers, &c.
14	Th	
15	F	
16	S	Univ. Lond. B.Sc. Pass List published.
17	S	Twenty-third Sunday after Trinity.
18	M	
19	Tu	Univ. Lond. M.B. Pass List published. Last day for [Entry for B.S. Exam., Univ. Lond.
20	W	Univ. Lond. M.B. Honours Exam.
21	Th	
22	F	
23	S	
24	S	Twenty-fourth Sunday after Trinity.
25	M	
26	Tu	
27	W	
28	Th	
29	F	
30	S	St. Andrew. Last day for applications for Medical and [Surgical Registrarships.

Examinations for the Fellowship of the Royal College of Surgeons of England held this month.

* *Applications for these appointments to be made to the Medical Secretary, by letter, stating the Candidate's qualifications, the offices which he has previously held in the Hospital, and the number of Maternity Cases attended.*

DECEMBER, 1895.

1	S	Advent Sunday.
2	M	Univ. Lond. M.D. and M.S. Exam.
3	Tu	Univ. Lond. B.S. Exam. House Officers, &c., commence duty.
4	W	Last day for applications for Clinical Clerkships and
5	Th	Dresserships.
6	F	
7	S	
8	S	Second Sunday in Advent.
9	M	
10	Tu	
11	W	Meeting to appoint Clinical Clerks and Dressers.
12	Th	
13	F	
14	S	
15	S	Third Sunday in Advent.
16	M	Last day for Entry for Matriculation Univ. Lond.
17	Tu	
18	W	Univ. Lond. M.D. List published.
19	Th	
20	F	
21	S	St. Thomas.
22	S	Fourth Sunday in Advent.
23	M	Last day for Entry for Prel. Sci. and Int. Med. Exam. Univ.
24	Tu	Lond.
25	W	Christmas Day.
26	Th	Saint Stephen.
27	F	Saint John, Evang.
28	S	Holy Innocents.
29	S	First Sunday after Christmas.
30	M	
31	Tu	

University of Cambridge First, Second, and Third M.B. Examinations are held this month.

Preliminary Examination in Arts of the Society of Apothecaries held this month.

Examinations for Diploma in Public Health of the Royal Colleges of Physicians and Surgeons held this month.

JANUARY, 1896.

1	W	Circumcision.
2	Th	
3	F	Meeting of Library Committee.
4	S	
5	S	Second Sunday after Christmas.
6	M	Epiphany.
7	Tu	Clinical Clerks and Dressers commence duty.
8	W	
9	Th	
10	F	
11	S	
12	S	First Sunday after Epiphany.
13	M	Univ. Lond. Matriculation Examination.
14	Tu	
15	W	
16	Th	
17	F	
18	S	
19	S	Second Sunday after Epiphany.
20	M	Univ. Lond. Prelim. Scientific (M.B.) Exam. and Intermd.
21	Tu	[Exam. in Medicine.
22	W	
23	Th	
24	F	
25	S	Conversion of St. Paul.
26	S	Third Sunday after Epiphany.
27	M	
28	Tu	
29	W	
30	Th	
31	F	

First, Second, and Third Examinations of the Examining Board in England are held this month.

The Registration and Museum Committees meet during this month.

FEBRUARY, 1896.

1	S	
2	℣	Septuagesima Sunday.
3	M	
4	Tu	
5	W	Last day for applications for House Offices, &c.*
6	Th	
7	F	
8	S	
9	℣	Sexagesima Sunday.
10	M	Queen Victoria married, 1840.
11	Tu	
12	W	Univ. Lond. Prel. Sci. (M. B.) List published. Meeting to
13	Th	[appoint House Officers, &c.
14	F	
15	S	
16	℣	Quinquagesima Sunday.
17	M	
18	Tu	
19	W	Ash Wednesday. Univ. Lond. Matric. and Int. Med. Pass
20	Th	[Lists published.
21	F	
22	S	
23	℣	First Sunday in Lent.
24	M	St. Matthias.
25	Tu	
26	W	
27	Th	
28	F	
29	S	

* *Applications for these appointments to be made to the Medical Secretary, by letter, stating the Candidate's qualifications, the offices which he has previously held in the Hospital, and the number of Maternity cases attended.*

MARCH, 1896.

1	S	Second Sunday in Lent.
2	M	
3	Tu	House Officers, &c., commence duty.
4	W	Last day for applications for Clinical Clerkships and
5	Th	[Dresserships.
6	F	
7	S	
8	S	Third Sunday in Lent.
9	M	
10	Tu	Prince of Wales married, 1863.
11	W	Meeting to appoint Clinical Clerks and Dressers.
12	Th	
13	F	
14	S	
15	S	Fourth Sunday in Lent.
16	M	
17	Tu	
18	W	
19	Th	
20	F	
21	S	
22	S	Fifth Sunday in Lent.
23	M	
24	Tu	
25	W	Annunciation. Lady Day.
26	Th	
27	F	
28	S	Registrar's Report for last year due.
29	S	Palm Sunday.
30	M	
31	Tu	Last day for Reports for Solly Medal.

APRIL, 1896.

1	W	
2	Th	
3	F	Good Friday.
4	S	
5	S	Easter Sunday.
6	M	Last day for Entry for M.B. Exam. Univ. Lond. Bank
7	Tu	Clinical Clerks and Dressers commence duty. [Holiday.
8	W	
9	Th	
10	F	
11	S	
12	S	First Sunday after Easter. Low Sunday.
13	M	
14	Tu	
15	W	
16	Th	
17	F	
18	S	
19	S	Second Sunday after Easter.
20	M	
21	Tu	
22	W	
23	Th	
24	F	
25	S	St. Mark.
26	S	Third Sunday after Easter.
27	M	
28	Tu	
29	W	
30	Th	

Univ. Camb. Third M.B. and First, Second, and Third Examinations of the Examining Board in England are held this month.

The Examinations for the Mead and Cheselden Medals take place this month.

The Annual Inspection of the Museum and meeting of Museum Committee take place during this month.

The Registration Committee meets during this month.

MAY, 1896.

1	F	St. Philip and St. James.
2	S	
3	S	Fourth Sunday after Easter.
4	M	Univ. Lond. M.B. Exam.
5	Tu	
6	W	Last day for application for House Offices, &c.*
7	Th	
8	F	
9	S	
10	S	Fifth Sunday after Easter. Rogation Sunday.
11	M	Last day for Entry for Matric. Univ. Lond. First Stone of
12	Tu	[St. Thomas's New Hospital laid by H.M. the Queen, 1868.
13	W	Meeting to appoint House Officers, &c.
14	Th	Ascension Day. Holy Thursday.
15	F	
16	S	
17	S	Sunday after Ascension Day.
18	M	
19	Tu	
20	W	
21	Th	
22	F	
23	S	
24	S	Whit Sunday. Queen Victoria born, 1819.
25	M	Bank Holiday. No Lectures.
26	Tu	Univ. Lond. M.B. Pass List published.
27	W	
28	Th	
29	F	
30	S	
31	S	Trinity Sunday.

Examinations for the Fellowship of the Royal College of Surgeons of England held this month.

* *Applications for these appointments to be made to the Medical Secretary, by letter, stating the Candidate's qualifications, the offices which he has previously held in the Hospital, and the number of Maternity Cases attended.*

JUNE, 1896.

1	M	
2	Tu	House Officers, &c., commence duty.
3	W	Last day for applications for Clinical Clerkships and
4	Th	[Dresserships.
5	F	
6	S	
7	S	First Sunday after Trinity.
8	M	Univ. Lond. Matric. Exam.
9	Tu	New Buildings of Medical School opened by H.R.H. the
		[Duke of Connaught, K.G., 1894.
10	W	Meeting to appoint Clinical Clerks and Dressers.
11	Th	St. Barnabas.
12	F	
13	S	
14	S	Second Sunday after Trinity.
15	M	Last day for Entry for Int. Med. Exam. Univ. London.
16	Tu	
17	W	
18	Th	
19	F	
20	S	Queen's Accession.
21	S	Third Sunday after Trinity. New St. Thomas's Hospital
		[opened by H. M. the Queen, 1871.
22	M	Last day for Entry for Prel. Sci. (M.B.) Exam. Univ. Lond.
23	Tu	
24	W	St. John Baptist. Midsummer Day.
25	Th	
26	F	
27	S	
28	S	Fourth Sunday after Trinity. Queen Victoria crowned, 1838.
29	M	St. Peter.
30	Tu	

The Harveian Oration is delivered at the Royal College of Physicians annually in the month of June.

Doctor of Science Examination at London University takes place within the first 21 days of June.

Univ. Camb. First and Second M.B. Examinations are held within the first 14 days of June.

Examinations for Diploma in Public Health of the Royal Colleges of Physicians and Surgeons held this month.

Examination for the Beaney Scholarship held this month.

JULY, 1896.

1	W	Last day for applications for House Offices, &c., for
2	Th	[September.*
3	F	Meeting of Library Committee.
4	S	
5	S	Fifth Sunday after Trinity.
6	M	
7	Tu	Clinical Clerks and Dressers commence duty.
8	W	Meeting to appoint House Officers, &c., for September.
9	Th	
10	F	
11	S	
12	S	Sixth Sunday after Trinity.
13	M	Univ. Lond. Int. Med. Exam.
14	Tu	
15	W	Univ. Lond. Matric. List published.
16	Th	
17	F	
18	S	
19	S	Seventh Sunday after Trinity.
20	M	Univ. Lond. Prelim. Scientific (M.B.) Exam.
21	Tu	
22	W	
23	Th	
24	F	
25	S	St. James.
26	S	Eighth Sunday after Trinity.
27	M	
28	Tu	
29	W	
30	Th	
31	F	

First, Second, and Third Examinations of the Examining Board in England are held this month.

The Registration and Museum Committees meet during this month.

* *Applications for these appointments to be made to the Medical Secretary, by letter, stating the Candidate's qualifications, the offices which he has previously held in the Hospital, and the number of Maternity Cases attended.*

AUGUST, 1896.

1	S	
2	℣	Ninth Sunday after Trinity.
3	M	Bank Holiday.
4	Tu	Univ. Lond. Int. Med. Pass List published.
5	W	Univ. Lond. Prelim. Sci. Pass List published.
6	Th	
7	F	
8	S	
9	℣	Tenth Sunday after Trinity.
10	M	
11	Tu	
12	W	
13	Th	
14	F	
15	S	
16	℣	Eleventh Sunday after Trinity.
17	M	
18	Tu	
19	W	
20	Th	
21	F	
22	S	
23	℣	Twelth Sunday after Trinity.
24	M	St. Bartholomew.
25	Tu	
26	W	
27	Th	
28	F	
29	S	
30	℣	
31	M	

SEPTEMBER, 1896.

1	Tu	House Officers, &c., commence duty.
2	W	Last day for applications for Clinical Clerkships and
3	Th	[Dresserships.
4	F	
5	S	
6	S	Thirteenth Sunday after Trinity.
7	M	
8	Tu	
9	W	
10	Th	
11	F	
12	S	
13	S	Fourteenth Sunday after Trinity.
14	M	
15	Tu	
16	W	Meeting to appoint Clinical Clerks and Dressers.
17	Th	
18	F	
19	S	
20	S	Fifteenth Sunday after Trinity.
21	M	St. Matthew. Last day for Entry for B.Sc. Exam., Univ.
22	Tu	[Lond.
23	W	
24	Th	
25	F	
26	S	
27	S	Sixteenth Sunday after Trinity.
28	M	Last day for Entry Univ. Lond. M.B. Exam.
29	Tu	Michaelmas Day.
30	W	Last day for Essay for Grainger Prize.

The Hospital Entrance Scholarships Examination takes place during the last week of this month.

OCTOBER, 1896.

1	Th	Distribution of Prizes, 4 P.M. Annual Dinner.
2	F	Meeting of Library Committee.
3	S	
4	S	Seventeenth Sunday after Trinity.
5	M	
6	Tu	Clinical Clerks and Dressers commence duty.
7	W	
8	Th	
9	F	
10	S	
11	S	Eighteenth Sunday after Trinity.
12	M	
13	Tu	
14	W	
15	Th	
16	F	
17	S	
18	S	Nineteenth Sunday after Trinity. St. Luke.
19	M	Univ. Lond. B.Sc. Exam.
20	Tu	
21	W	
22	Th	
23	F	
24	S	
25	S	Twentieth Sunday after Trinity. St. Simon and St. Jude.
26	M	Univ. Lond. M.B. Exam.
27	Tu	
28	W	
29	Th	
30	F	
31	S	

The Registration and Museum Committees meet during this month.

The Primary Examination of the Society of Apothecaries is held Quarterly, in the months of October, January, April, and July. The Final is held monthly; the Surgical part commences on the second Wednesday, and the Medical on the Monday following.

First, Second, and Third Examinations of the Examining Board in England are held this month.

HOLDERS OF APPOINTMENTS IN ST. THOMAS'S HOSPITAL SINCE 1871.

RESIDENT ASSISTANT PHYSICIANS.

1871. G. H. Evans
1874. F. C. Turner
1876. S. J. Sharkey
1880. G. Gulliver
1882. C. E. Sheppard
1883. R. Percy Smith
1885. H. W. G. Mackenzie
1888. H. P. Hawkins
1891. H. G. Turney
1894. S. G. Toller

RESIDENT ASSISTANT SURGEONS.

1871. W. W. Wagstaffe
1874. A. O. MacKellar
1876. H. H. Clutton
1880. B. Pitts
1883. G. H. Makins
1886. W. H. Battle
1888. H. B. Robinson
1891. E. C. Stabb
1894. F. C. Abbott

MEDICAL REGISTRARS.

1871. S. E. Solly
1872. F. Pollard
1873. W. S. Greenfield
1875. H. W. Verdon
1876. T. C. Charles
1877. E. S. Norris
1878. T. C. Charles
1879. W. B. Hadden
1880. G. Gulliver
1882. C. E. Sheppard
1883. W. B. Hadden
1888. H. W. G. Mackenzie
1893. S. G. Toller
1894. C. R. Box

SURGICAL REGISTRARS.

1871. W. Anderson
1872. C. E. Saunders
1873. C. Creighton
1874. S. Osborn
1876. H. H. Clutton, C. H. Newby
1878. H. P. Potter
1881. W. H. Battle
1886. G. H. Makins
1887. C. A. Ballance
1888. E. Solly
1891. E. C. Stabb
1892. F. C. Abbott
1894. C. S. Wallace

OBSTETRIC REGISTRAR.

1893. W. W. H. Tate

HOUSE PHYSICIANS.

1871-2. E. Cox
S. Osborn
J. S. Slater

1872-3. B. Addy
A. H. Laver
L. Williams
W. Garton
R. Zimmerman

1873-4. E. Welchman
H. B. Donkin
T. Highton
C. M. Taylor
H. S. Bennett

1874-5. A. S. L. Newington
J. W. Clarkson
W. S. Mavor
A. Lingard

1875-6. C. H. Newby
G. F. Rossiter
W. Edmunds
H. P. Potter
S. W. J. Joseph

1876-7. T. Twining
J. F. Nicholson
J. R. Leeson
W. H. Page.

1877-8. J. A. M. Moullin
G. H. Makins
H. U. Smith
W. Tyrrell

1878-9. W. H. Battle
G. H. D. Gimlette
C. E. Sheppard
F. M. Sandwith

1879-80. W. W. Groome
R. P. Smith
J. Shaw
A. Newsholme

1880-1. H. P. Butler
G. S. Hatton
H. R. Hutton
T. D. Acland

1881-2. T. D. Savill
C. F. Coxwell
A. B. Carpenter
S. W. Sutton

1882-3. A. E. Wells
W. Wansbrough Jones
C. W. Haig-Brown
W. Fell
E. F. White, L. W. Bickle } (Non-res.)

1883-4. A. Foxwell
H. M. N. Milton
C. D. Green
W. Hull
W. J. Sheppard, J. Orford } (Non-res.)

1884-5. G. D. Johnston
F. F. Caiger
H. B. Robinson
H. W. G. Mackenzie
F. W. S. Stone, H. H. Lankester } (Non-res.)

1885-6. R. M. Williams
J. M. Clarke
J. S. Hutton
E. D. Ritchie
T. Glover Lyon, Y. Saneyoshi, F. M. Haig } (Non-res.)

1886-7. F. D. Crowdy
A. A. Brockatt
C. S. Evans
S. W. Wheaton
A. E. Godfrey, A. J. H. Montague } (Non-res.)

1887-8. H. P. Hawkins
H. J. Macevoy
W. W. Ord
E. Hobhouse
R. Nairn
H. J. Smyth, R. Nairn, J. T. Calvert } (Non-res.)

1888-9. H. B. Luard
C. W. Cooke
H. C. Bristowe
H. G. Turney
C. H. Eccles, W. H. L. Copeland } (Non-res.)

1889-90. T. P. Cowen
F. C. Abbott
F. E. Forward
S. G. Toller
M. H. Spencer, L. Cobbett } (Non-res.)

1890-1. W. W. Stabb
T. A. Dukes
A. King
W. F. Umney
G. H. Wickham, H. J. Cooper, H. Low, C. P. Lovell } (Non-res.)

1891-2. C. R. Box
T. H. Kellock
C. Latter
J. J. Perkins
C. Wyman
G. R. F. Stilwell, D. F. Shearer, W. P. Purvis } (Non-res.)

HOUSE PHYSICIANS—*continued.*

1892-3.
W. A. Bowring
W. Watkins-Pitchford
C. S. Jaffé
A. R. O. Milton
W. P. Fooks
A. Dalzell
E. M. Hainworth
M. R. P. Dorman
(Non-res.)

1893-4.
T. W. Hicks
G. W. Thompson
A. E. Russell
W. J. C. Merry
P. Northcote
G. W. H. Bird
F. Pershouse
C. W. Windsor
(Non-res.)

1894-5

R. E. Nix
A. M. Collcutt
E. A. Saunders
G. G. Genge

T. G. Nicholson
A. S. F. Grünbaum
F. J. Brakenridge
J. W. Laver
(Non-res.)

HOUSE SURGEONS.

1871-2.
R. Cory
H. Williams
S. Osborn
T. H. Bonser

1872-3.
E. Sergeant
W. Garton
A. H. Laver
G. Cleghorn

1873-4.
I. Boulger
E. Welchman
A. V. Maybury
H. W. Verdon

1874-5.
J. Crossman
G. M. Taylor
G. F. Rossiter
J. W. Clarkson

1875-6.
H. P. Potter
H. H. Clutton
C. H. Newby
R. Maples

1876-7.
B. Pitts
R. Maples
C. C. Smith
W. Edmunds

1877-8.
J. F. Nicholson
J. Black
F. H. Weekes
W. H. Battle

1878-9.
G. H. Makins
G. H. D. Gimlette
H. U. Smith
W. F. Haslam
K. Takaki
H. Castle

1879-80.
D. S. Davies
R. J. Williamson
R. P. Smith
C. E. Sheppard

1880-1.
J. R. Lunn
C. A. Ballance
H. P. Butler
A. B. Carpenter

1881-2.
T. D. Acland
F. W. Marlow
M. P. M. Collier
E. F. White

1882-3.
W. A. Duncan
C. W. Haig Brown
H. M. Milton
A. E. Wells

1883-4.
W. Wansbrough Jones
G. F. Cooper
F. F. Caiger
G. D. Johnston

1884-5.
J. Orford
H. B. Robinson
W. Hull
C. D. Green

1885-6.
R. Lawson
B. Relton
F. D. Crowdy
H. Cameron Kidd

1886-7.
E. S. Gooddy
F. E. Nichol
E. D. Ritchie
J. S. Hutton
W. H. C. Staveley

1887-8.
S. H. Jones
J. H. Tonking
E. C. Stabb
L. A. Bidwell

1888-9.
W. F. Brook
F. Fawssett
W. W. Ord
J. T. Calvert
F. C. Abbott
R. V. Solly
C. H. James
C. Brown

HOUSE SURGEONS—*continued.*

1889-90. H. G. Turney
A. N. Boycott
H. H. Hulbert
F. R. S. Milton
T. W. Lambert
T. P. Cowen
G. E. Anson
H. Gervis

1890-1. A. F. Stabb
A. C. Lankester
H. W. Nix
E. E. Ware
S. G. Toller
W. S. Griffith
W. G. G. Stokes
L. A. J. Rouillard

1891-2. L. Cobbett
T. H. Haydon
J. R. Harper
C. Wyman
T. H. Kellock
C. R. Box
W. F. E. Milton
T. A. M. Forde

1892-3. A. Banks
H. Burden
J. H. Fisher
P. J. Atkey
W. P. Purvis
R. R. Law
W. G. Sutcliffe
W. L. Wainwright

1893-4. C. S. Wallace
E. Smith
W. Redpath
C. Planck
S. W. F. Richardson
E. M. Hainworth
A. R. O. Milton
G. W. Thompson

1894-5. H. A. Dickson
L. J. Miskin
A. W. Cuff
W. J. C. Merry
G. J. Arnold
R. Fox Symons
A. E. Russell
W. H. Harding.

ASSISTANT HOUSE PHYSICIANS.

1877-8. W. Tyrrell
R. B. Bothamley
W. H. Battle
E. H. Hare

1878-9. S. A. Crick
J. H. Battye
K. Takaki
W. W. Groome
W. B. Hadden
W. F. Haslam
R. C. Bennington

1879-80. R. P. Smith
D. S. Davies
J. Shaw
A. Newsholme
J. R. Lunn
R. J. Williamson

1880-1. J. R. Lunn
T. D. Savill
G. S. Hatton
F. R. Walters
C. B. Richardson
H. Swale
J. B. Lawford

1881-2. C. A. Ballance
M. P. M. Collier
A. B. Carpenter
H. N. Holberton
S. W. Sutton
A. E. Wells
F. W. Marlow
R. Heelis

1882-3. F. E. Marston
G. F. Cooper
C. W. Haig-Brown
H. M. N. Milton
W. Fell
W. J. Sheppard

1883-4. W. Hull
F. F. Caiger
C. D. Green
W. B. Tomson

1884-5. T. Scutt
Y. Saneyoshi
R. Lawson
H. W. G. Mackenzie
R. M. Williams

1885-6. J. R. Staddon
E. D. Ritchie
E. S. Gooddy
A. E. Godfrey

1886-7. C. S. Evans
H. Cameron Kidd
W. H. C. Staveley
H. P. Hawkins

1887-8. H. A. Sansom
H. T. Bulstrode
S. B. Cook

1888-9. H. B. Seddon
G. R. Anderson

1889-90. W. B. De Jersey
T. H. Dickson

ASSISTANT HOUSE SURGEONS.

1877-8. E. L. G. Gamble
G. H. D. Gimlette

1878-9. W. F. Haslam
H. Castle
R. P. Smith
D. S. Davies

1879-80. R. J. Williamson
C. A. Ballance
A. Newsholme
J. R. Lunn

1880-1. F. R. Walters
C. B. Richardson
M. P. M. Collier
H. Swale

1881-2. S. W. Sutton
A. E. Wells
E. F. White
C. W. Haig-Brown

1882-3. H. M. N. Milton
W. Fell
G. F. Cooper
W. Hull

1883-4. W. Wansbrough Jones
G. D. Johnston
F. F. Caiger
W. J. Sheppard

1884-5. H. B. Robinson
C. D. Green
R. Lawson
B. Relton
Y. Saneyoshi

1885-6. E. D. Ritchie
F. D. Crowdy
H. Cameron Kidd
E. S. Gooddy

1886-7. F. E. Nichol
C. S. Evans
W. H. C. Staveley
S. H. Jones
K. Totsuka
J. H. Tonking
E. C. Stabb

1887-8. L. A. Bidwell
W. F. Brook
J. T. Calvert
W. W. Ord
F. Fawssett
E. Solly
C. Brown
R. V. Solly

1888-9. C. H. James
C. W. Cooke
S. B. Cook
E. Hobhouse
H. Duncan
F. C. Abbott
A. N. Boycott
H. H. Hulbert

1889-90. F. R. S. Milton
H. C. Bristowe
G. E. Anson
H. Gervis
T. P. Cowen
A. F. Stabb
A. C. Lankester
J. H. Dewhurst

1890-1. H. W. Nix
E. E. Ware
S. G. Toller
W. G. G. Stokes
D. F. Shearer
L. A. J. Rouillard
T. H. Haydon
J. R. Harper

1891-2 L. Cobbett
C. Wyman
W. F. E. Milton
T. A. M. Forde
T. H. Kellock
C. R. Box
H. Burden
P. J. Atkey

1892-3. A. Banks
J. H. Fisher
R. R. Law
W. G. Sutcliffe
W. P. Purvis
W. L. Wainwright
C. S. Wallace
E. Smith

1893-4. W. Redpath
C. Planck
E. M. Hainworth
A. R. O. Milton
S. W. F. Richardson
R. W. Ord
J. W. Hewett
H. A. Dickson

1894-5. L. J. Miskin
A. W. Cuff
G. J. Arnold
R. Fox Symons
A. E. Russell
H. W. Harding
E. O. Thurston
A. L. Home

RESIDENT ACCOUCHEURS.

1871-2.	B. Addy
	W. Garton
1872-3.	J. S. Slater
	M. H. C. Palmer
	E. Sergeant
	L. Williams
1873-4.	G. M. Whitehead
	C. H. Newby
	I. Boulger
	E. H. Davis
1874-5.	H. S. Bennett
	C. M. Taylor
1875-6.	W. Edmunds
	S. W. J. Joseph
	G. F. Rossiter
	C. C. Smith
1876-7.	W. Morgan
	T. Milman
	B. Pitts
	R. Maples
1877-8.	C. H. H. Cameron
	G. H. D. Gimlette
	C. H. White
	F. H. Weekes
1878-9.	J. F. Nicholson
	W. Tyrrell
	F. M. Sandwith
	H. U. Smith
1879-80.	W. H. Battle
	K. Takaki
	C. E. Sheppard
	C. A. Ballance
1880-1.	H. Castle
	A. Newsholme
	J. Shaw
	J. R. Lunn
1881-2.	W. F. Haslam
	H. P. Butler
	W. A. Duncan
	T. D. Acland
1882-3.	A. E. Wells
	G. F. Cooper
	S. W. Sutton
	T. D. Savill
1883-4.	F. F. Caiger
	W. Fell
	W. J. Sheppard
	W. Wansbrough Jones
1884-5.	J. Orford
	W. Hull
	C. D. Green
	G. D. Johnston
1885-6.	R. E. Rouse
	J. E. Kershaw
	H. H. Lankester
	A. A. Brockatt
1886-7.	J. S. Hutton
	C. Yeoman
	A. E. Godfrey
	H. J. Macevoy
1887-8.	E. Solly
	W. A. Bond
	H. J. Smyth
	J. D. Ballance
1888-9.	S. W. Wheaton
	C. H. James
	H. B. Luard
	E. C. Stabb
1889-90.	F. Fawssett
	G. R. Anderson
	G. E. Anson
	A. N. Boycott
1890-1.	H. B. Osburn
	H. Gervis
	H. Low
	W. R. Carter

SENIOR OBSTETRIC HOUSE PHYSICIANS.

1891-2.	J. R. Harper
	W. G. G. Stokes
	W. F. Umney
	A Banks
1892-3.	W. L. Wainwright
	T. H. Haydon
	C. S. Wallace
	R. K. Ellis
1893-4.	W. A. Bowring
	J. H. Fisher
	R. F. Chance
	T. W. Hicks
1894-5.	C. S. Jaffé
	P. C. Fenwick
	E. G. E. Arnold
	W. E. F. Tinley

SENIOR OBSTETRIC CLERKS.

1889-90. H. B. Osburn
H. Low

1890-1. W. G. G. Stokes
W. R. Carter
J. R. Harper
H. D. Levick

JUNIOR OBSTETRIC HOUSE PHYSICIANS.

1891-2. W. F. Umney
A. Banks
W. L. Wainwright
T. H. Haydon

1892-3. C. Latter
C. S. Wallace
R. K. Ellis
W. A. Bowring

1893-4. J. H. Fisher
R. F. Chance
T. W. Hicks
C. S. Jaffé

1894-5. P. C. Fenwick
E. G. E. Arnold
W. E. F. Tinley
S. W. F. Richardson

OPHTHALMIC HOUSE SURGEONS.

These appointments took the place of the "Clinical Assistants in the Eye Department."

1890-1. H. C. Bristowe
F. E. Forward

1891-2. C. H. Usher
S. G. Toller

1892-3. J. Fisher
E. P. Isaacs

1893-4. J. F. Rudall
J. H. Fisher

1894-5. J. H. Fisher
H. G. Toombs

SCHOLARSHIPS AND MEDALS.

ENTRANCE SCIENCE SCHOLARSHIPS.

1875-6. H. A. H. Fenton
T. D. Savill

1876-7. R. J. Williamson
H. N. Holberton

1877-8. W. Wansbrough Jones
A. E. Wells

1878-9. W. Hull

1879-80. R. M. Williams
B. Relton

1880-1. R. Lawson
H. H. Lankester

1881-2. Sydney H. Jones
J. S. Hutton

1882-3. H. Duncan
E. D. Shirtliff

1883-4. C. W. Cooke
F. Fawssett

1884-5. F. C. Abbott
C. J. Martin

1885-6. A. F. Stabb
S. G. Toller

1886-7. C. P. Lovell
M. C. Clutterbuck

1887-8. J. E. Harris
W. B. Winston

1888-9. E. M. Hainworth
E. Smith

1889-90. T. G. Nicholson
A. E. Russell

1890-1. P. J. Dear
W. E. Dixon
H. C. Crouch

1891-2. A. H. Stewart
F. H. Gervis

1892-3. A. W. Sikes
C. G. Seligmann

1893-4. R. W. C. Pierce
H. E. Hewitt

1894-5. J. Gaff
H. R. Beale

UNIVERSITY SCHOLARSHIP.

1894-5. W. McDougall

TITE SCHOLARSHIPS.

1875. Change made in mode of award.

1861-2-3. H. Summerhayes
1864-5-8. J. J. Ridge
1867-8. H. Meadows
1870-1-2. I. Boulger
1873-4-5. F. H. Peck
1875-6. T. D. Savill
1876-7. W. A. Duncan
1877-8. W. Wansbrough Jones
1878-9. F. H. Furnival
1879-80. C. D. Green
1880-1. R. Lawson
1881-2. Sydney H. Jones
1882-3. H. P. Hawkins
1883-4. F. Fawssett
1884-5. F. C. Abbott
1885-6. A. F. Stabb
1886-7. H. Burden
1887-8. J. H. Fisher
1888-9. E. Smith
1889-90. S. W. F. Richardson
1890-1. K. J. Previté Orton
1891-2. J. C. Harcourt
1892-3. A. W. Sikes
1893-4. H. E. Hewitt
1894-5. J. Gaff

MUSGROVE SCHOLARSHIPS.

Founded, April, 1875.

1875-6-7. S. J. Taylor
1877-8-9. W. A. Duncan
1880-1-2. W. B. Tomson
1882-3-4. S. H. Jones } æq.
K. Totsuka }
1884-5-6. F. Fawssett
1886-7-8. A. F. Stabb
1888-9-90. J. H. Fisher
1890-1-2. S. W. F. Richardson
1892-3-4. M. Takayasu
1894-5. H. E. Hewitt.

PEACOCK SCHOLARSHIPS.

1883-4-5. H. P. Hawkins
1885-6-7. F. C. Abbott
1887-8-9. C. P. Lovell
1889-90-1. C. Planck
1891-2-3. G. G. Genge
1893-4-5. A. W. Sikes

CHESELDEN MEDALLISTS.

1850-1. F. J. Money
1851-2. H. Lankester
T. B. Crosby (bronze medal)
1852-3. J. E. Moreton
1853-4. W. N. Chipperfield
1854-5. W. M. Ord
1855-6. J. W. Cousins
1856-7. C. F. George
1857-8. E. Woakes
1858-9. C. H. Drake
1859-60. T. Drake
1860-1. J. W. Hicks
1861-2. J. F. Deck
1862-3. C. A. Greaves
1863-4. W. W. Wagstaffe
1864-5. F. H. Ward
1865-6. W. W. Inglis
1866-7. W. Anderson
1867-8. F. Pollard
1868-9. L. M. Thomas
1869-70. E. Sergeant
1870-1. J. H. Bonser
1871-2. A. H. Laver
1872-3. G. F. Rossiter
1873-4. H. P. Potter
1874-5. J. F. Nicholson

CHESELDEN MEDALLISTS—*continued.*

1875-6.	————
1876-7.	H. U. Smith
1877-8.	W. F. Haslam
1878-9.	K. Takaki
1879-80.	W. A. Duncan
1880-1.	C. W. Haig-Brown
1881-2.	————
1882-3.	G. D. Johnston
1883-4.	R. Lawson
1884-5.	S. H. Jones
1885-6.	J. H. Tonking
1886-7.	F. Fawssett
1887-8.	F. C. Abbott
1888-9.	A. C. Lankester
1889-90.	T. H. Kellock
1890-1.	A. Banks
1891-2.	W. G. Sutcliffe
1892-3.	S. W. F. Richardson
1893-4.	E. O. Thurston
1894-5.	B. Dyball
	A. J. Martineau (Bronze Medal)

NEWMAN SMITH PRIZE (MEAD).

1850.	J. W. Keyworth
1853.	J. E. Moreton
1854.	E. Clapton
1855.	W. H. Stone
1858.	E. Woakes
1859.	J. Hilditch

MEAD MEDALLISTS.

In lieu of the Newman Smith Prize from December, 1874.

1874-5.	J. F. Nicholson
1875-6.	————
1876-7.	G. B. Longstaff
1877-8.	S. J. Taylor
1878-9.	T. D. Acland
1879-80.	C. F. Coxwell
1880-1.	W. Wansbrough Jones
1881-2.	W. Hull
1882-3.	F. F. Caiger
1883-4.	H. W. G. Mackenzie
1884-5.	F. D. Crowdy
1885-6.	S. W. Wheaton H. J. Macevoy (Bronze Medal)
1886-7.	W. W. Ord
1887-8.	H. G. Turney
1888-9.	S. G. Toller
1889-90.	W. W. Stabb
1890-1.	C. Latter
1891-2.	A. R. O. Milton
1892-3.	E. A. Saunders
1893-4.	G. G. Genge
1894-5.	F. B. Thornton

TREASURER'S GOLD MEDALLISTS.

1846-7.	H. D. Benwell
1847-8.	J. S. Bristowe
1848-9.	L. W. Sedgwick
1849-50.	A. Carpenter
1850-1.	F. J. Money (Gold Medal) C. W. Chaldecott (Silver Medal)
1851-2.	H. Lankester
1852-3.	J. E. Moreton
1853-4.	W. N. Chipperfield
1854-5.	W. M. Ord
1855-6.	W. H. Stone
1856-7.	J. Williams
1857-8.	H. Gervis
1858-9.	C. H. Drake
1859-60.	T. Drake
1860-1.	J. W. Hicks
1861-2.	J. F. Deck
1862-3.	H. Summerhayes
1863-4.	W. W. Wagstaffe
1864-5.	F. H. Ward
1865-6.	A. Waller
1866-7.	N. C. Dobson

TREASURER'S GOLD MEDALLISTS—*continued.*

1867-8. J. J. Ridge
1868-9. H. W. Saunders
1869-70. J. S. Slater
1870-1. B. Addy
1871-2. A. V. Maybury
1872-3. G. F. Rossiter
1873-4. H. C. Sandford
1874-5. J. F. Nicholson
1875-6. ————————
1876-7. C. E. Sheppard
1877-8. S. J. Taylor
1878-9. K. Takaki
1879-80. W. A. Duncan
1880-1. W. Wansbrough Jones
1881-2. W. J. Sheppard
1882-3. W. B. Tomson
1883-4. R. Lawson
1884-5. S. H. Jones
1885-6. H. J. Smyth
1886-7. F. Fawssett
1887-8. F. C. Abbott
1888-9. A. F. Stabb
1889-90. A. King
1890-1. J. H. Fisher
1891-2. E. Smith
1892-3. S. W. F. Richardson
1893-4 G. G. Genge
1894-5. A. J. Martineau

SOLLY MEDALLISTS.

Founded, 1873.

1877. W. H. Battle
C. W. de Lacy Evans
1878. C. E. Sheppard
1880. C. A. Ballance
1882. W. A. Duncan
1884. J. Pietersen
1886. E. Solly
1888. C. H. James
1890. C. Wyman
1892. W. B. Winston
1893. M. A. Teale

GRAINGER TESTIMONIAL PRIZE.

1866. J. J. Ridge
1874-5. H. P. Potter
1878-9. W. A. Duncan
1882-3. C. S. Sherrington
1886-7. F. G. Parsons
1893-4. A. S. F. Grünbaum

BRISTOWE MEDAL.

1894-5. A. L. Home

THE SALTERS' COMPANY RESEARCH FELLOWSHIP.

1895. C. S. Jaffé

LOCAL LIST OF OLD STUDENTS OF ST. THOMAS'S HOSPITAL.

ABBOTS-BROMLEY, STAFF.—
N. J. Newbould.

ABBOTSBURY, DORSET.—
W. Hawkins.

ABERAVON, GLAMORG.—
A. Jeffreys.

ABERDARE, GLAMORG.—
E. Jones, E. J. T. Jones.

ABERYSTWITH, CARD.—
T. P. Beddoes.

AINTREE, LANC.—
E. S. Sugden.

ALFORD, LINC.—
A. E. Odling.

ALNWICK, NTHLD.—
R. B. Robson.

ASHBY-DE-LA-ZOUCH, LEIC.—
R. R. W. Logan.

AUDLEM, CHESH.—
H. Greaves.

AUGHTON, YORKS.—
W. Garton.

AYLESTONE, LEIC.—
E. H. Snoad.

AYLSHAM, NORFOLK.—
P. C. Shepheard.

BAGSHOT, SURREY.—
H. B. Osburn.

BAKEWELL, DERBY.—
E. B. Wrench, E. M. Wrench.

BAMBER BRIDGE, LANC.—
J. Bibby.

BANBURY, OXFORD.—
R. Rygate.

BANWELL, SOMERS.—
R. R. Hatherell.

BARNSTAPLE, DEVON.—
J. R. Harper, T. Johnston.

BARTON-UPON-HUMBER, LINC.—
W. H. Sissons.

BASCHURCH, SALOP.—
E. H. O. Sankey.

BASLOW, DERBYSHIRE.—
E. M. Wrench.

BATH, SOMERSET—
W. N. Heygate, J. Jarvis, P. King.

BATLEY, YORKS.—
J. Russell.

BAWTRY, YORKS.—
W. F. Ward.

BECCLES, SUFFOLK.—
H. P. Helsham.

BECKENHAM, KENT.—
E. Carpenter, G. R. F. Stilwell.

BEDDINGTON, SURREY.—
C. R. Box.

BEDFORD.—
C. G. Johnson, W. G. Johnson, A. S. Phillips, J. Raby, W. Stokes (retired).

BELPER, DERBYSHIRE.—
H. Lomas.

BENENDEN, KENT.—
J. C. R. Richardson.

BEXHILL, SUSSEX.—
J. Rew.

BIRKENHEAD, CHESHIRE.—
H. L. Pearson.

BIRMINGHAM, WARWICK.—
J. D Ballance, H. R. Bracey, A. Foxwell, A. S. F. Grünbaum, W. F. Haslam, A. Price, F. B. G. Stableford.

BISHOP'S STORTFORD, HERTS.—
H. Gervis, J. E. Morris.

BLACKROD, LANC.—
H. Smith.

BLACKWATER, HANTS.—
E. D. Ritchie.

BLAGDON, BRISTOL.—
T. O. Halliwell.

BOOTLE, LANC.—
R. J. Sprakeling.

BOREHAM STREET, SUSSEX.—
A. R. Barnes.

BOROUGHBRIDGE, YORKS.—
H. R. Sedgwick, J. Sedgwick.

BORROWASH, DERBYSHIRE.—
J. A. Hunt.

BORSTAL, KENT.—
O. F. N. Treadwell.
BOSTON, LINC.—
F. Snaith, R. E. E. South.
BOTESDALE, SUFFOLK.—
A. W. Pearse.
BOTLEY, HANTS.—
A. Pern, E. C. Pern.
BOURNEMOUTH, HANTS.—
T. W. Blake, H. K. Hitchcock, W. H. L. Marriner, W. S. Tebb, H. S. Tuppen, G. E. Weary, G. F. Worthington.
BOWDON, CHESH.—
H. R. Hutton.
BRACKNELL, BERKS.—
H. Parson.
BRADFORD, YORKS.—
G. H. Dodd, G. W. Grabham, S. Lodge, jun.
BRADFORD-UPON-AVON, WILTS.—
W. J. A. Adye.
BRAUNTON, DEVON.—
W. J. Harper.
BRECON.—
G. P. Francis, D. C. L. Williams.
BRENT KNOLL, SOMERS.—
J. W. Papillon.
BRENTFORD, MIDDLESEX.—
W. S. Fincham, F. N. Williams.
BRIDGNORTH, SALOP—
F. M. House, W. Watkins-Pitchford.
BRIDLINGTON-QUAY, YORKS.—
H. J. C. Godfrey.
BRIDPORT, DORSET.—
S. J. Allden.
BRIGHTLINGSEA, ESSEX.—
H. S. Cooper.
BRIGHTON, SUSSEX.—
W. V. Bird (retired), J. Brock, H. P. Gilbert, R. H. Gwynn, L. Houghton, L. Huntley, G. D. Kerr, A. R. O. Milton, A. Newsholme, G. W. Parker, C. B. Richardson, R. E. Rouse, C. J. Smith, M. B. Tanner, E. Treves, E. Webster, C. H. Welch.
BRISTOL.—
H. Appleton (retired), F. St. J. Bullen, D. S. Davies, W. D. Henderson.
BRIXWORTH, NORTHANTS.—
W. L. Wainwright.
BROAD CHALK, WILTS.—
A. Longman.
BROADWAS-ON-TEME, WORC.—
J. T. Penhall (retired).
BROCKHURST, HANTS.—
R. Holloway.
BROMLEY, KENT.—
P. I. Cook, W. W. Inglis.
BROMSGROVE, WORC.—
H. C. Kidd.
BUCKDEN, HUNTS.—
W. H. Hillyer.
BUDLEIGH-SALTERTON, DEVON.—
R. Walker.
BURTON-ON-TRENT, STAFF.—
L. W. Burton.
BURWASH, SUSSEX.—
W. Summerhayes.
BURY ST. EDMUNDS, SUFF.—
J. S. Hinnell.
BUXTON, DERBY.—
A. Haviland.
BYFLEET, SURREY.—
J. J. Powell, H. S. Willson.
CAERLEON, MON.—
C. W. De Gruchy.
CALDICOT, MON.—
H. H. Heffernan.
CAMBORNE, CORNWALL.—
A. Harris-Bickford, J. T. Thomas, J. H. Tonking.
CAMBRIDGE.—
J. Carter (retired), L. Cobbett, J. Colston, J. Hough, W. S. Melsome, E. G. Trevithick, G. E. Wherry.
CANE HILL, SURREY.—
A. N. Boycott, J. M. Moody.
CAPEL, SURREY.—
J. L. Jardine.
CARDIFF, GLAMORG.—
C. E. Hardyman.
CARSHALTON, SURREY.—
J. Wallace (retired).
CATERHAM VALLEY, SURREY.—
W. S. Johns.
CHALFONT, BUCKS.—
C. Brooks.
CHARLTON, KENT.—
H. L. Bernays.
CHARTHAM, KENT.—
G. C. Fitz-Gerald.
CHATHAM, KENT.—
H. J. Frederick.
CHEDDAR, SOMERS.—
R. W. Statham.
CHELTENHAM, GLOUC.—
W. G. N. Manley.
CHESTER.—
J. Duff.
CHESTERFIELD, DERBY.—
H. J. Palmer.
CHEW MAGNA, SOMERS.—
G. W. F. Bury.
CHIPPING CAMPDEN, GLOUC.—
J. H. Dewhurst.
CHIPPING NORTON, OXF.—
A. Turle.

CHOBHAM, SURREY.—
W. H. Allen.
CHRISTCHURCH, HANTS.—
H. T. H. Mead.
CHUDLEIGH, DEVON.—
F. C. W. Hounsell.
CHURCH STRETTON, SALOP.—
H. Barnett.
CLAYGATE, SURREY.—
W. F. Manners.
CLEETHORPES, LINC.—
J. K. Pickford.
CLEOBURY MORTIMER, SALOP.—
F. H. Thompson.
CLIFTON, GLOUC.—
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COBHAM, SURREY.—
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COLNE, LANC.—
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COWES, I.W.—
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CRAVEN ARMS, SALOP.—
E. Tredinnick.
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CREWE, CHESH.—
W. Hodgson.
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H. Saunders.
DEDHAM, ESSEX.—
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T. E. Amyot.
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DOVERCOURT, ESSEX.—
H. Gurney.
DROITWICH, WORC.—
T. Corbett.
DUKINFIELD, CHESHIRE.—
J. R. S. Park.
DUNSTABLE, BEDS.—
F. W. D. Henslowe.
DUNSTER, SOMERSET.—
J. W. G. Grant.
DURHAM.—
Rev. J. T. Fowler (retired).
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W. R. M. Berridge.
ENFIELD, MIDDLESEX.—
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E. G. C. Daniel, A. F. W. King.
ERITH, KENT.—
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ESHER, SURREY.—
R. F. Walker.
ETON, BUCKS.—
E. S. Norris.
EVESHAM, WORC.—
J. S. Slater.
EXETER, DEVON.—
H. Andrew, A. Goulston, H. T. Hartnoll, J. S. Perkins, R. V. Solly, E. E. Ware.

FAIRFORD, GLOUC.—
D. Iles.

FAREHAM, HANTS.—
H. D. Brook.

FARNCOMBE, SURREY.—
W. O. T. Annesley.

FLEET, HANTS.—
G. H. Wickham.

FLEETWOOD, LANC.—
W. H. Robinson.

FOLKESTONE, KENT.—
A. W. Jones, C. Latter, A. E. Price.

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GATESHEAD, DURHAM.—
A. Green.

GODALMING, SURREY.—
C. W. Haig-Brown.

GODSTONE, SURREY.—
S. I. Mansel-Howe.

GOSPORT, HANTS.—
J. Goldsmith.

GOUDHURST, KENT.—
J. W. Carpenter.

GRANGE-OVER-SANDS, LANC.—
A. Beardsley.

GRANTHAM, LINC.—
D. H. Fraser.

GREAT BOOKHAM, SURREY.—
S. B. Stedman.

GREAT DRIFFIELD, YORKS.—
R. B. Eccles, R. Wood.

GREAT GLENN, LEIC.—
W. T. Crick, E. V. Phillips.

GREAT GRIMSBY, LINC.—
G. Gresswell.

GREAT TORRINGTON, DEVON.—
E. Sutcliff.

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HAILEYBURY.—
T. A. V. Ford.

HALIFAX, YORKS.—
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HALSTEAD, ESSEX.—
F. Christie.

HAMPTON HILL, MIDDLX.—
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HANLEY, STAFF.—
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HARTFORD, CHESH.—
T. Moreton.

HARWICH, ESSEX.—
R. Henry, T. E. Stuart.

HASLEMERE, SURREY.—
C. S. Wallace.

HASTINGS, SUSSEX.—
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E. G. Renny.

HAYLE, CORNWALL.—
W. F. Cleaver.

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HEATHFIELD, SUSSEX.—
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J. M. James.

HEIGHINGTON, LINC.—
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HELLESDON, NORFOLK.—
W. Harris.

HEMEL HEMPSTEAD, HERTS.—
A. J. Hubbard.

HENFIELD, SUSSEX.—
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HERNE BAY, KENT.—
E. W. Senior.

HERTFORD.—
J. T. Evans.

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D. P. S. Hill.

HINDERWELL, YORKS.—
J. W. Staniforth.

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H. E. Davies.

HODDESDEN, HERTS.—
W. L. Horley (retired).

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J. B. Gillam.

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J. T. Jones.

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J. D. Phillips.

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W. H. Coates.

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H. Gorst.

ILFRACOMBE, SOMERS.—
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T. Hodson.

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KEIGHLEY, YORKS.—
E. Chaffers.

KEYINGHAM, YORKS.—
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G. W. Jotham.

KINGSBRIDGE, DEVON.—
C. E. Bashall.

KINGSCLERE, BERKS.—
R. Maples.

KING'S NORTON, WORC.—
H. W. Cave-Brown-Cave.

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H. B. Hodges.

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LEISTON, SUFFOLK.—
R. Cook.

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LINCOLN.—
F. S. Lambert.

LINGWOOD, HANTS.—
R. Barnes.

LINTON, HEREFORD.—
E. W. Palin.

LISKEARD, CORNWALL.—
L. Bostock.

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H. J. Gover.

LITTLEHAMPTON, SUSSEX.—
R. D. G. Hall.

LITTLEMORE, OXFORD.—
C. H. Stewart.

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G. Appleton (retired).

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R. H. Mills-Roberts.

LLANDEBIE, CARM.—
F. G. Southern.

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LONGFLEET, DORSET.—
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LOUGHOR, GLAMORG.—
T. M. Jones.

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J. W. Mactavish.

LOWESTOFT, SUFFOLK.—
A. Marshall.

LUDLOW, SALOP.—
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LUTON, BEDS.—
W. B. Tomson.

LYME REGIS, DORSET.—
A. S. Dutton.

MACCLESFIELD, CHES.—
E. S. Jotham.

MACHYNLLETH, MONTG.—
A. O. Davies.

MAIDSTONE, KENT.—
A. S. Gedge.

MALTON, YORKS.—
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MANSFIELD, NOTTS.—
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MARKET HARBOROUGH, LEIC.—
T. A. Durrant.
MARKET LAVINGTON, WILTS.—
J. S. Lush, W. H. LUSH.
MARKET OVERTON, RUTLD.—
J. R. Scott.
MARKET WEIGHTON, YORKS.—
T. J. Jefferson, H. Simpson.
MARLBOROUGH, WILTS.—
T. H. Haydon.
MARPLE, CHES.—
J. R. Carver.
MELKSHAM, WILTS.—
S. Grose.
MERTHYR TYDVIL, GLAMORG.—
T. J. Dyke.
MILDENHALL, SUFF.—
G. W. Ord.
MILFORD, SURREY.—
J. Doubleday (retired).
MINCHINHAMPTON, GLOUC.—
F. Fowler.
MOLESEY, SURREY.—
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H. Williams (not in practice).
MORTIMER, BERKS.—
F. A. Floyer, W. J. Roalfe-Cox.
NAFFERTON, YORKS.—
C. H. Eccles.
NAILSWORTH, GLOUC.—
C. J. Power.
NEATH, GLAMORG.—
J. W. Thomas.
NETTLEBED, OXFORD.—
O. Roberts.
NEW MALDEN, SURREY.—
R. Andrews.
NEW SLEAFORD, LINC.—
C. F. Bedford, T. E. Jacobson.
NEWARK, NOTTS.—
H. Stallard.
NEWCASTLE-UNDER-LYME, STAFF.—
G. S. Hatton.
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NEWPORT, MON.—
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NEWPORT, PEMB.—
P. M. G. Williams.
NEWQUAY, CORNWALL.—
W. J. Stephens.
NEWTON-ABBOT, DEVON.—
R. H. Grimbly.
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W. H. C. Shaw.
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J. Shepheard.
NORTHALLERTON, YORKS.—
J. A. Hutchinson.
NORTHWICH, CHESHIRE.—
T. Moreton.
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H. Huskinson.
OKEHAMPTON, DEVON.—
G. V. Burd.
OLDHAM, LANC.—
T. Fort.
ORPINGTON, KENT.—
R. Davis.
OSWESTRY, SALOP.—
A. B. Blaikie.
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R. Grimbly, W. J. C. Merry, M. D. Stark.
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J. B. Cooke.
PARWICH, DERBY.—
J. B. Dreaper.
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H. T. Jones, M. H. Laslett.
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PLUMSTEAD, KENT.—
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PLYMOUTH, DEVON.—
R. T. Cann.
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W. H. Smart.
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PONT-Y-PRIDD, GLAM.—
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J. L. Vardy.
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PORTSWOOD, HANTS.—
R. Ives.
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RAINHILL, LANC.—
J. Wiglesworth.
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C. C. Smith.
REDRUTH, CORNW.—
H. Harris.
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C. O. Parsons.
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C. Hoar.
ROCHDALE, LANC.—
H. C. March.
ROCHESTER, KENT.—
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ROMFORD, ESSEX.—
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ROSS, HEREFORD.—
G. Strong.
ROTHERHAM, YORKS.—
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ROTTINGDEAN, SUSSEX.—
A. E. Ridsdale.
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C. Dukes, B. Relton, W. Sharp (retired).
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A. Banks.
ST. ALBAN'S, HERTS.—
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ST. LEONARD'S, SUSSEX.—
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ST. NEOTS, HUNTS.—
E. J. Cross.
SANDOWN, I.W.—
W. H. Smith.
SCARBOROUGH, YORKS.—
G. W. Thompson, R. Wood.
SENNY BRIDGE, BRECON.—
J. P. Jeffreys-Powell.
SETTLE, YORKS.—
H. B. Shepherd.
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SHAFTESBURY, DORSET.—
C. S. Evans.
SHEEN, DERBY.—
A. T. Bury.
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SHERE, SURREY.—
I. R. Cory.
SHERWOOD RISE, NOTTS.—
W. G. Laws.
SHIRLEY, HANTS.—
G. H. Weston.
SHOREHAM, SUSSEX.—
C. M. Kempe.
SHOTTISHAM, SUFF.—
V. Edwards.
SHREWSBURY, SALOP.—
L. E. G. De Woolfson, W. H. Wigham.
SIDCUP, KENT.—
G. W. Davis, W. R. Hanbury, R. R. Law.
SIDLESHAM, SUSSEX.—
J. E. F. André.
SIDMOUTH, DEVON.—
L. L. B. Williams.
SKETTY, GLAMORG.—
A. L. Perkins.
SLOUGH, BUCKS.—
R. S. Charsley, H. Fraser.
SOLIHULL, WARW.—
A. V. Bernays.
SOUTHAMPTON.—
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SOUTHBOROUGH, KENT.—
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SOUTH MOLTON, DEVON.—
H. J. Smyth.

SOUTHPORT, LANC.—
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SPONDON, DERBYSH.—
R. A. Bayliss.
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T. W. Bullock.
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STAINDROP, DURH.—
G. E. Vivian.
STAINES, MIDDLESEX.—
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STAMFORD, LINC.—
W. D. Eddowes.
STANDISH, LANC.—
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STANNINGLEY, YORKS.—
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STEYNING, SUSSEX.—
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STOCK, ESSEX.—
A. Clarke
STOCKLAND, DEVON.—
W. S. Black.
STOCKPORT, CHES.—
J. S. Revely.
STOCKTON-ON-TEES, DUR.—
T. H. Godfrey.
STOKE-UPON-TRENT.—
H. Faulds, S. Wilson.
STONE, STAFF.—
H. Hartley.
STONEYCROFT, LANC.—
G. R. W. Parker.
STROUD, GLOUC.—
A. W. Waller.
STURMINSTER-NEWTON, DORSET.—
J. Tarzewell (retired).
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W. Biggam, T. C. Squance.
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SUTTON, SURREY.—
P. C. Phillips.
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SWINTON, LANC.—
J. Williams.
TARVIN, CHES.—
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TATTENHALL, CHESH.—
T. B. Brierley, Jun.
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H. Swale.
TEDDINGTON, MIDDLX.—
J. S. Johnson, J. P. Topping.
TEIGNMOUTH, DEVON.—
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TENBURY, WORC.—
J. L. Sweet.
TETTENHALL, STAFF.—
J. Cooke.
TEWKESBURY, GLOUC.—
P. L. Moore.
THAME, OXFORD.—
R. A. F. Gurney.
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C. A. Morgan.
THORNTON, YORKS.—
C. Yeoman.
THRAPSTONE, NORTHANTS.—
T. W. Buckley.
TICEHURST, SUSSEX.—
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TICKHILL, YORKS.—
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TIVERTON, DEVON.—
G. F. Welsford.
TOLLERTON, YORKS.—
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TRING, HERTS.—
E. Pope (retired), R. B. Williams.
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TRURO, CORNWALL.—
T. Truran.
TUCKINGMILL, CORNWALL.—
A. Harris-Bickford.
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Rev. H. F. Banham.
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P. C. Low.
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UCKFIELD, SUSSEX.—
G. Lucas.
ULCEBY, LINCS.—
T. Baron.
UPPER CWMTWRCH, GLAM.—
S. G. Morris.
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VENTNOR, I.W.—
J. L. WHITEHEAD.

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WALKERINGHAM, NOTTS.—
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WALLINGFORD, BERKS.—
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WALTHAM CROSS, HERTS.
W. S. Mavor.
WAREHAM, DORSET.—
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W. R. Carter. E. W. Parsey.
WATFORD, HERTS.—
A. E. Cox.
WALTON, HERTS.—
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WELLINGTON COLLEGE, BERKS.—
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T. J. Jones.
WELSHPOOL, MONTG.—
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WEST HARTLEPOOL, DURHAM.—
E. H. Davis.
WESTBURY, WILTS.—
W. H. Reed.
WESTON, SOMERS.—
W. H. Smith.
WESTON-SUPER-MARE, SOMERS.—
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WEYBRIDGE, SURREY.—
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WHITBY, YORKS.—
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WHITCHURCH, DEVON.—
J. H. Sims
WHITCHURCH, SALOP.—
T. Groom (retired).
WHITSTABLE, KENT.—
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J. H. Webster.
WICKHAM MARKET, SUFF.—
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WICKWAR, GLOUC.—
G. J. Arnold.
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J. B. Stuart.
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A. Purkiss.
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H. V. Palin.
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YARMOUTH, NORF.—
H. Collier.
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T. S. Usher.
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Rev. J. Mitchell.
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W. A. Evelyn, C. Hodgson, N. L. Hood, F. H. Weekes.

SCOTLAND.

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STRANRAER, WIGTOWN.—
T. Easton.

IRELAND.

DOWNPATRICK, DOWN.—
J. Garner.
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G. Stoker.
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E. J. Cowen.
KNOCK, ANTRIM.—
J. K. Kerr.
LEIGHLINBRIDGE, CARLOW.—
J. J. Norton.

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ADDISON, C. J. Surg.-Maj. Army.
ALPIN, W. G. P. Surg.-Capt. I.M.S. Bengal.
AVETOOM, S. T. Surg.-Maj. I.M.S. Bombay.
BARKER, F. R. Surg.-Maj. Army.
BENT, G. Surg.-Capt. Army.
BOULGER, I. Surg.-Maj. Army.
BURDEN, H. Surg.-Lt. I.M.S. Bengal.
BUTTERWORTH, S. Surg.-Capt. Army.
CALVERT, J. T. Surg.-Capt. I.M.S. Bengal.
CAMERON, C. Surg.-Lt.-Col. I.M.S. Bengal.
CARR-WHITE, P. Surg.-Capt. I.M.S. Madras.
CHEVERS, H. L. G. Surg.-Capt. Army.
CLARKSON, F. C. Surg.-Capt. I.M.S. Bengal.
CLARKSON, J. W. Surg.-Capt. I.M.S. Bombay.
COAD, J. E. Surg. R.N.
COLMAN, G. M. H. Surg.-Capt. Army.
COOKSON, H. Surg.-Maj. I.M.S. Bengal. Retired.
COWEN, W. A. D. Surg.-Maj. Army.
DE LOM, H. A. Surg.-Capt. Army.
DEWES, F. J. Surg.-Capt. I.M.S. Madras.
DICKERSON, S. H. Brig.-Surg. Army. Retired.
DURANT, R. J. A. Surg.-Capt. Army.
EARLE, H. E. L. Surg. R.N.
EDYE, J. S. Surg.-Capt. Army.
FISHER, J. Surg.-Lt. I.M.S. Bengal.
FLETCHER, W. B. Fleet-Surg. R.N. Retired.
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GRAY, C. Surg.-Maj. Army. Retired.
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HALL, J. L. Surg.-Maj. Army.
HARRIS, F. A. Surg.-Maj. Army.
HARVEY, T. Staff-Surg. R.N. Retired.
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LANCASTER, J. Surg.-Lt.-Col. I.M.S. Madras.
LIGHTFOOT, W. S. Staff-Surg. R.N.
LUARD, H. B. Surg.-Capt. I.M.S. Bengal.
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MATURIN, B. A. Surg.-Capt. Army.
MICHAEL, H. J. Surg.-Maj. Army.
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PRALL, C.B. Surg.-Lt. I.M.S. Bengal.
REILLY, C. C. Surg.-Capt. Army.
ROBINSON, G. W. Surg.-Maj. Army.
ROBINSON, S. C. B. Surg.-Maj. Army.
ROE, E. A. H. Surg.-Lt.-Col. Army. Retired.
RORIE, J. Dep.-Insp.-Gen. R.N. Retired.
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SAUNDERS, H. Surg.-Maj. Army.
SINGH, B. J. Surg.-Capt. I.M.S., Bengal.
SKARDON, T. G. Brig.-Surg. I.M.S. Bengal. Retired.
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SLAUGHTER, W. B. Surg.-Lt.-Col. Army.
TODD, H. J. Mc C. Staff-Surg. R.N.
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WALKER, G. L. Surg.-Maj. I.M.S. Madras.
WHISTON, P. H. Surg.-Capt. Army.
WILES, J. Dep.-Surg.-Gen. Army. Retired.
WILLIAMS, A. H. Surg.-Lt.-Col. I.M.S. Bengal.
WILLIS, C. F. Surg.-Maj. I.M.S. Bombay.
WOODHOUSE, T. P. Surg.-Maj. Army.
WRIGHT, E. H. Surg.-Capt. I.M.S. Madras.

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ABBOTT, C. E. The Shrapnels, Taunton.

ABBOTT, F. C. St. Thomas's Hospital. B.Sc., M.B., M.S. Lond., F.R.C.S.; Resident Assistant Surgeon.
w 1884-5. 1st Year Student, 1st Entrance Science Scholarship, The Wm. Tite Scholarship.
s 1885. 1st Year Student, 1st Coll. Prize.
w 1885-6. 2nd Year Student, The Peacock Scholarship.
w 1886-7. 3rd Year Student, 2nd tenure of Peacock Scholarship with 1st Coll. Prize.
w 1887-8. 4th Year Student, The Cheselden Medal;
Treasurer's Gold Medal.
H.P., H.S., A.H.S., Demonstrator of Anatomy and Surgical Registrar.

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w 1877-8. 3rd Year Physical Society's Prize. Paper published in Hospital Reports, Vol. VIII.
w 1878 9. 4th Year Student, Mead Medal. Demonstr. of Pract. Med., Morb. Histol. and Pract. Physiol., H.S., H.P., R.A.

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1869. 1st Year Student, 1st Coll. Prize; Physical Society's 1st Year's Prize.
1870. 2nd Year Student, 1st Coll. Prize; Physical Society's 2nd Year's Prize.
1871. 3rd Year Student, 1st Coll. Prize; Prosector's Prize;
Treasurer's Gold Medal.
R.A., H.P.

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ALLINGHAM, W. 25, Grosvenor St., Grosvenor Square. F.R.C.S.
1854. Descriptive Anatomy, Prize; Surgery, Prize.
1855. Medicine, Prize; Clinical Medicine, President's Prize; Clinical Medicine, Treasurer's Prize.
Surgical Tutor, Demonstrator of Anatomy, and Surgical Registrar.

ALLIOTT, A. J. Rosendal, Sevenoaks, Kent. B.A., M.D. Cantab.

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1863. 1st Year Student, 3rd Coll. Prize.
1866. 2nd Year Student, 3rd Coll. Prize.
1867. 3rd Year Student, 1st Coll. Prize; Physical Society's 3rd Year's Prize; Cheselden Medal.
Surg. Registrar.

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w 1874. 3rd Year Student, 3rd Coll. Prize.

ARNISON, W. D. 31, Oxford Street, Newcastle-on-Tyne. M.D., B.S. Durham.

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1863. Matriculation Examination — Physics and Natural History, 1st Coll. Prize;
1st Year Student, 1st Coll. Prize.
1864. 2nd Year Student, 2nd Coll. Prize.
1865. 3rd Year Student, 3rd Coll. Prize.
H.S.

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w 1876-7. 3rd Year Student, 3rd Coll. Prize, and Physical Society's 3rd Year's Prize.
1880. The Solly Medal and Prize.
Surgical Registrar, Demonstrator of Anatomy
H.P., H.S., A.H.S., A.H.P., R.A.

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w 1887-8. 1st Year Student, 1st Coll. Prize.
s 1890. 3rd Year Student, 2nd Coll. Prize.
w 1890-1. 4th Year Student, The Cheselden Medal.
H.S., A.H.S., Asst. Demonstr. of Pract. Surg., Clin. Asst. Skin Dept., Jun. and Sen. Obst. H.P.

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Formerly Obst. Phys. and Lect. on Obst., Lond., St. Thos. and St. Geo. Hosps, and Exam. Univ. Lond., R.C.P. Lond., and R.C.S. Eng.

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1850. Clinical Medicine, Prize.
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w 1875. 2nd Year Student, 3rd Coll. Prize.
w 1876-7. 3rd Year Student. The First Solly Medal and Prize.
Resident Assistant Surgeon, Surgical Registrar, H.S., H.P., A.H.P., R.A.

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BERNAYS, A. V. Solihull, Warwk. B.A., M.B. Cantab.
w 1880-1. 3rd Year Student, 1st Coll. Prize.

BERNAYS, H. L. Rivoli, Old Charlton, Kent.
w 1873. Prosector's Prize.

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s 1879. 2nd Year Student, 1st Coll. Prize.
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1860. 1st Year Student, Treasurer's Prize Matriculation Exam., Prize.
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w 1872. 2nd Year Student, Prosector's Prize.
H.S.

BLACK, W. S. Stockland, Honiton, Devon.

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1870. 1st Year Student, Sir Wm. Tite's Scholarship.
1871. 2nd Year, Sir Wm. Tite's Scholarship.
w 1872. 3rd Year, Sir Wm. Tite's S holarship.
H.S., R.A.

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w 1885-6. 1st Year Student, 2nd Coll. Prize.
H.S., A.H.S., Res. H.P., Clin. Asst. Ear Dept.

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BRISTOWE, J. S. 13, Old Burlington Street. M.D., F.R.C.P., F.R.S., LL.D., Consulting Physician to St. Thomas's Hospital.
1847. Descriptive and Surgical Anatomy, Prize.
1848. Physiology and Anatomy, Prize; Practical Chemistry, Prize; Botany, Prize; Comparative Anatomy, Prize; Surgery, Prize; General Proficiency, Treasurer's Medal.
Lecturer on General Pathology, and Joint Lecturer on Medicine, &c., &c. H.S.

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BROMET, E. West London Hospital.

BROOK, H. D. Fareham, Hants. D.P.H.

BROOK, W. F. Langlands House, Swansea. F.R.C.S.
H.S., A.H.S., Clin. Asst. Ear, Skin and Throat Depts.

BROOKS, C. Chalfont St. Peter, Bucks.

BROWN, F. G. 17, Finsbury Circus.
1861. 2nd Year Student, 3rd Coll. Prize.
1862. 3rd Year Student, 3rd Coll. Prize.

BROWN, L. D. Henley Villa, Ealing.

BROWNE, E. A. 39, Rodney Street, Liverpool. F.R.C.S. Edin. Lect. on Ophth. Univ. Coll. Liverpool.

BRUCE, R. M. Med. Superint., West. Hosp., Seagrave Road, Fulham.

BRYAN, F., Asst. Med. Off. Lond. Co. Asyl., Colney Hatch. M.B. Durh.

BUCKLEY, T. W. The Poplars, Thrapstone, Northants.

BULLEN, F. ST. J. Manor House, Redland Road, Bristol.

BULLOCK, H. M. 2, Corban Place, Bath Rd., Hounslow, Middlx.

BULLOCK, T. W. Overtown House, Spring Grove, Isleworth.

BULSTRODE, H. T. Local Govt. Bd., Whitehall. M.A., M.D. Camb., D.P.H.
H.P., A.H.P., Clin. Asst. Throat, Skin and Ear Depts.

BURD, G. V. Okehampton, Devon.

BURDEN, H. Surg.-Lt., I.M.S. Bengal. F.R.C.S.
w 1886-7. 1st Year Student, The William Tite Scholarship.
s 1887. 1st Year Student, 2nd Coll. Prize.
w 1887-8. 2nd Year Student, 2nd Coll. Prize.
H.S., A.H.S.

BURNS, A. H. Hamslade, Sweyn Road, Cliftonville, Margate.

BURTON, C. F. 1, Crescent Place, Whitby, Yorks.

BURTON, L. W. 47, Lichfield Street, Burton-on-Trent.

BURY, A. T. Sheen, Ashbourne, Derbyshire.

BURY, G. W. F. Chew Magna, Somers. F.R.C.S.

BUTLER, G. R. 38, Carlton Vale.

BUTTERWORTH, S. Surg.-Capt., Army.

BYERS, D. W. 20, Leicester Road, Maindee, Newport, Mon.

BYHAM, W. L. 15, High Street, Spalding, Linc.

CADE, H. L. Albert Villa, 2, Queen's Road, Peckham.

CAIGER, F. F. Med. Superint. S.W. Fever Hosp., Stockwell. M.D., B.S., M.R.C.P., Lond.; D.P.H. Cantab.
w 1879-80. 1st Year Student, 3rd Coll. Prize.
w 1880-1. 2nd Year Student, 3rd Coll. Prize.
w 1882-3. 4th Year, the Mead Medal.
H.S., A.H.S., H.P., A.H.P., R.A.

CALVERT, J.T. Surg.-Capt. Bengal Army. M.B. Lond.; D.P.H.
H.P., H.S., A.H.S.

CAMERON, C. Surg.-Lt.-Col., I.M.S. Bengal.

CAMERON, C. H. H. Kolassy House, Old Town, Eastbourne. D.P.H.
R.A.

CAMERON, W. J. Ellerslie, Balham Park Road. M.B. Lond.

CANDLER, G. Harleston, Norfolk. B.A. Cantab.

CANN, R. T. 20, Tavistock Place, Plymouth.
s 1882. 2nd Year Student, 1st Coll. Prize.
s 1883. 3rd Year Student, 2nd Coll. Prize.

CANNOCK, C.W. Shefford, Beds.

CAPORN, A. W. 71, Horsford Road, Brixton Hill.

CARPENTER, A. B. Wykeham House, Bedford Park, Croydon, Surrey. M.A., M.B. Oxon.
H.P., A.H.P., H.S.

CARPENTER, E. Trevathan, Albemarle Road, Beckenham, Kent.

CARPENTER, G. 12, Welbeck Street, Cavendish Square. M.D. Lond.; M.R.C.P.
w 1880-1. 1st Year Student, 3rd Coll. Prize.
s 1881. 1st Coll. Prize.
w 1881-2. 2nd Year Student, 3rd Coll. Prize; Prosector's Prize.

CARPENTER, J. W. Goudhurst, Kent. M.D. St. And.

CARR-WHITE, P. Surg.-Capt. Madras Army. M.B., C.M. Edin.

CARSTAIRS, H. J. Chiswell Lodge, Worcester Park, Surrey.
Clin. Asst. Throat Dept.

CARTER, A. W. M.B., C.M. Edin.

CARTER, J. 30, Petty Cury, Cambridge (retired). F.R.C.S.

CARTER, W. 78, Rodney Street, Liverpool. M.D., B.Sc., L.L.B., F.R.C.P. Lond.; F.R.C.S.I.

CARTER, W. R. 25, High Street, Warwick. M.A., M.B., B.C. Cantab.
R.A., S.O.C.

CARVER, J. R. The Hollies, Marple, Stockport.
Clin. Asst. Skin Dept.

CASTLE, H. 31, Portland Terr., Newport, I.W. M.B. Lond.
w 1874-5. 1st Year Student, 2nd Coll. Prize.
s 1875. 3rd College Prize.
w 1876-7. Physical Society's 3rd Year's Prize.
H.S., A.H.S., R.A.

CAUDLE, A. W. W. Henfield, Sussex.
1858. Clinical Medicine, Prize.

CAUDLE, C. E. Nazira, Assam, India.

CAUDWELL, E. Harleston, Norfolk.

CAVE-BROWN-CAVE, H. W. Lifford Hall, King's Norton, Worc.

CHAFFERS, E. Broomfield, Keighley, Yorks. F.R.C.S.

CHALDECOTT, C. W. Nower Lodge, Dorking, Surrey.
1849. Materia Medica, 2nd Prize; 1st Year Student, Scholarship.
1850. Surgery, Prize.
1851. Physiology, Prize; Physical Society's Essay, Treasurer's Prize; General Proficiency, Treasurer's Silver Medal.

CHALDECOTT, H. Rose Hill House, Dorking, Surrey.

CHALDECOTT, J. H. 401, Old Kent Road.

CHANCE, R. F. Rockstone House, Carlton Crescent, Southampton.
Obst., H.P.

CHAPMAN, G. W. 98, New Walk, Leicester.

CHARPENTIER, A. Rathmines House, Uxbridge, Middlx. M.D. Durh.
1882-3. 4th Year, The Mead Medal Exam., Special Mention.

CHARSLEY, R. S. The Barn, Slough, Bucks. B.A. Oxon.

CHEVERS, H. L. G. Surg.-Capt. Army.

CHISHOLM, M. Halifax, Nova Scotia, Canada.

CHRISTIE, F. 17, Head St., Halstead, Essex.

CHURCHILL, F. 4, Cranley Gardens, Queen's Gate. M.D., C.M. Edin.; F.R.C.S.
Surg. Registr.

CLAPTON, E. 22, St. Thomas's Street, S.E, and Towercroft, Lee. M.D., F.R.C.P., F.R.C.S.
1851. 1st Year Student, 1st Scholarship; Descriptive Anatomy Prize; Chemistry, Prize.
1852. 2nd Year Student, Scholarship; Physiology, Prize; Materia Medica, Prize; Botany, Prize.
1853. 3rd Year Student, Scholarship; Clinical Medicine, Treasurer's Prize; Physical Society's Essay, Treasurer's Prize.
1854. Ophthalmic Reports, Governor's Prize; Clinical Medicine, Mr. N. Smith's Prize.
Physician and Lecturer on Materia Medica.

CLAPTON, W. 27, Queen Street, E.C. F.R.C.S.
1855. Materia Medica, Prize.
1856. Clinical Medicine, Prize.

CLARK, F. 13, Fenchurch St.

CLARK, H. J. Wareham, Dorset.

CLARK, J. H. Goshen, St. Elizabeth, Jamaica. M.R.C.P. Edin.
1867. 2nd Year Student, Physical Society's 2nd Year's Prize.

CLARK, W. 20, Gatestone Park, Upper Norwood (retired).

CLARKE, A. Stock, Ingatestone, Essex.

CLARKE. A. W. V. 192, Battersea Park Road.

CLARKE, J. M. 28, Pembroke Road, Clifton, Bristol. M.A., M.D. Cantab., M.R.C.P. Physn. and Pathol. Bristol Gen. Hosp., Lect. on Pract. Physiol. Bristol Med. Sch.
H.P.

Clarke, J. T.

Clarkson, F. C. Surg.-Capt. Bengal Army.

Clarkson, J. W. Surg.-Maj. Bombay Army.
H.P., H.S.

Cleaver, H. A. Rozelle, St. Helen's Road, Hastings.

Cleaver, J. C. C. Port of Spain, Trinidad, West Indies.

Cleaver, W. F. Hayle, Cornwall.

Cleghorn, G. Blenheim, Marlboro', New Zealand. M.D. Durh.
H.S.

Clements, W. H.

Cleve, R. P. Temple Chambers, Victoria Embankment.
H.S., R.A.

Clifton, G. 48, London Road, and 7, Bowling Green Street, Leicester.

Clowes, J. P. Asst. Med. Off. Co. Asyl., Prestwich, Manchester.

Clutton, H. H. 2, Portland Place, W. M.A., M.B. Cantab.; F.R.C.S. Surgeon and Lect. on Surgery, St. Thomas's Hospital: Examiner in Surgery, Univ. Camb.
Res. Asst. Surg., Surg. Reg., H.S.

Coad, J. E. Surg. R.N. M.B. Durh.

Coates, W. H. Hucknall Torkard, Notts.

Cobbett, L. 2, Round Church St., Cambridge. M.A., M.B. Cantab.; F.R.C.S.; Demonstr. of Pathol. Univ. Camb.
H.S., A.H.S., H.P.

Cockell, F. E., Jun. Holly Lodge, Forest Road, Dalston.
Merchant Taylors' Scholar.

Cogill, H. Asst. Med. Off. Western Fever Hosp, Fulham, S.W.

Colby, G. Brawby Park, Pickering, Yorks.

Colby, W. T. The Mount, Malton, Yorks. M.D. St. And.; J. P.

Coleman, P. House Surg. Essex and Colchester Hosp., Colchester.

Collcutt, A.M. Acton House, East Sheen. M.A., M.B., B.C. Cantab.
H.P.

Collier, H. 12, Regent Rd., Gt. Yarmouth. M.D. Brux.

Collier, M. P. M. 133, Harley St., Cavendish Sq. M.S., M.B. Lond.; F.R.C.S.
H.S., A.H.S., A.H.P.

Collier, S. R. Hartfield Road, Wimbledon, M.D., M.Ch. R.U.I.

Collier, W. A. 13, Gt. College St., Westminster.

Colman, G. M. H. Surg.-Capt. Army. M.A., M.B. Cantab.

Colston, J. 189, Mill Road, Cambridge.

Conford, G. J. 40, Lyndhurst Grove, Peckham. B.A., M.B., B.Ch. Oxon.

Conner, J. R. T. 413, Kingsland Road, N.E. B.A.R.U.I., M.D., M.Ch.

Cook, P. I. Byfield, High St., Bromley, Kent. M.D. Brux.

Cook, R. Leiston, Suffolk. M.D. Glasg.

Cook, S.B. Doris Villas, Ellington Road, Ramsgate. B.A. Cape of Good Hope; M.D. Lond.
s 1883. 1st Year Student, 2nd Coll. Prize.
A.H.S., A.H.P., Clin. Asst. Skin Dept.

Cook, T. D. Glendon, Torquay. M.B., C.M. Glasg.

Cooke, C. W. 10, Cranleigh Villas, Walm Lane, Willesden Green. M.D. Lond.
Merchant Taylors' Scholar.
w 1883-4. 1st Year Student, 1st Entrance Science Scholarship.
H.P., A.H.S., Clin. Asst. Throat and Ear Depts.

Cooke, J. Tettenhall, Wolverhampton. M.B. Lond.; F.R.C.S.
1855. Comparative Anatomy, Prize.

Cooke, J. B. Asst. Surg. H.M. Con. Prison, Parkhurst, I.W.

Cookson, H. Surg.-Maj., I.M.S. Bengal. (Retired). F.R.C.S.

Coombe, A. T. 81, Clarendon Rd., Notting Hill.

Coombe, C. F. 459, Crookes Moor Road, Sheffield.

Cooper, G. F. Pisagua, Chili, South America. M.B., B.S. Lond.
H.S., A.H.S., A.H.P., R.A.

Cooper, H. J. Southwood, 36, Birdhurst Road, South Croydon, Surrey. M.A., M.B., B.C. Cantab.
H.P., Clin. Asst. Ear and Skin Depts.

Cooper, H. S. Brightlingsea, Essex.
s 1887. 2nd Year Student, 2nd Coll. Prize.

Cooper-Pattin, W. H. Municipal Offices, Norwich. M.A., M.B., B.C., D.P.H. Cantab. Med. Off. Health Norwich.

Copeland, W. H. L. 59, Warwick Road, Earl's Court. M.A., M.B., B.C. Cantab.
H.P.

Copeman, A. H. 19, Cromwell Cresc., South Kensington. B.A. Cantab.

Copeman, S. M. Local Govt. Bd., Whitehall. M.A., M.D. Cantab.; M.R.C.P., D.P.H.
Demonstrator of Physiology and Morbid Histology.

CORBETT, T. Impney, Droitwich, Worc.

CORBIN, E. K. 9, Saumarez Street, St. Peter Port, Guernsey.

CORBIN, M. A. B. 9, Saumarez Street, S. Peter Port, Guernsey. F.R.C.S.
1834. Cheselden Medal.

CORNWALL, J. W. M.A., M.B., B.C. Cantab.

CORY, I. R. Shere, Guildford, Surrey.

CORY, R. 73, Lambeth Palace Road. M.A., M.D. Cantab., F.R.C.P., Asst. Obst. Phys., Joint Lect. on For. Med.
1870. Physical Society's 3rd Year's Prize. H.S.

CORNEY, B. G. Suva, Fiji.

COULTER, W. 1, Theatre Road, Calcutta, India. M.D., M.Ch.Q.U.I.

COUSINS, J. W. Riversdale, Kent Rd., Southsea. M.D. Lond.; F.R.C.S., J. P.
1855. Surgery, Prize; Midwifery, Prize.
1856. Clinical Medicine, Prize; Surgery and Surgical Anatomy, Cheselden Medal.

COWELL, A. R. 39, Tanza Road, Parliament Hill Road, Hampstead. M.A., M.B., B.C. Cantab.

COWEN, E. I.

COWEN, E. J. 6, Brighton Terrace, Kingstown, Co. Dublin. M.B., B.S. Durh.

COWEN, P. 47, Ingleby Road, Upper Holloway. M.D. Durh.; D.P.H.
1862. 1st Year Student, 2nd Coll. Prize.
1863. 2nd Year Student, 2nd Coll. Prize.
1864. 3rd Year Student, 2nd Coll. Prize.

COWEN, T. P. 47, Ingleby Road, Upper Holloway. M.D., B.S. Lond.
W 1884-5. 1st Year Student, Half 1st and 2nd Coll. Prizes.
S 1885. 1st Year Student, 2nd Coll. Prize.
W 1885-6. 2nd Year Student, 1st Coll. Prize.
S 1886. 2nd Year Student, 1st Coll. Prize.
W 1886-7. 3rd Year Student, 2nd Coll. Prize.
H.P., H.S., A.H.S., Clin. Asst. Ear Dept.

COWEN, W. A. D. Surg.-Maj. Army.

COWIE, A. M. Hong Kong, China. M.B., C.M. Aber.

COWIE R. A. Harleston, Norfolk.

COX, A. E. 36, Hoghton Street, Southport. M.B., C.M. Edin

COX, A. E. 58, High St., Watford, and 78, Queen's Rd., Watford, Herts.

COX, J. L. C. Kingston, Jamaica.

COXWELL, C. F. Brighton, Melbourne, Australia. M.D. Cantab.
1880. 4th Year Student, the Mead Medal. H.P.

CRANSTOUN, C. B. 15, Broad St., Ludlow, Salop. M.B. Durh.

CRANSTOUN, G. 3, Brand Lane, Ludlow, Salop. M.B. Durh.

CREIGHTON, C. 32, Gt. Ormond St. M.A., M.D., C.M. Aberd.; M.A. Cantab. Surg. Registr.

CREIGHTON, E. Tankerville House, Greyhound Lane, Streatham Common, S.W.

CRICK, A. Vale Lodge, Abbey Road, St. John's Wood.

CRICK, S. A. Junior Army and Navy Club, St. James's. M.B., M.S. Durh.
W 1875-6. Prosector's Prize.
W 1876-7. 3rd Year Student, 3rd Coll. Prize. A.H.P., A.H.S.

CRICK, W. T. Rupert's Rest, Great Glenn, Leic.

CRISP, E. H. The Lawns, Balham Hill. B.A. Cantab.
Clin. Asst. Skin, Throat, and Ear Depts.

CRISP, T. M.B. Lond.

CHRISTIE, F. 17, Head Street, Halstead, Essex.

CROFT, J. 6, Mansfield Street, Cavendish Square. F.R.C.S., Consulting Surgeon St. Thomas's Hospital.
Special Lecturer on Clinical Surgery, Surgeon, Lecturer on Practical Surgery, and Assistant Demonstrator of Anatomy.

CROSBY, H. T. 19, Gordon Sq., W.C. M.A., M.B., B.C. Cantab.

CROSBY, T. B. 19, Gordon Sq., W.C. M.D. St. And.; F.R.C.S.
1851. Physiology, Prize; Descriptive Anatomy, Prize; Medicine, Prize; Surgery, Prize.
1852. Physiology, Prize; Forensic Medicine, Prize; Practical Chemistry, Prize; Surgery and Surgical Anatomy, *Bronze* Cheselden Medal; Comparative Anatomy, Prize.
H.S. and Demonstr. of Anat.

CROSS, E. J. St. Neots, Hunts. D.P.H. Cantab.

CROSS, G. Asst. House Surg. Gen. Infirm. Sheffield.

CROSS, J. 1, Finchley Road, Kennington Park.

CROSSMAN, J. 331, Wandsworth Rd. M.D. Durh.
1871. Physical Society's 1st Year's Prize.
1872. Physical Society's 2nd Year's Prize.
1873. Physical Society's 3rd Year's Prize. H.S.

CROUCH, H. C. 13, Maitland Park Villas, Haverstock Hill.
W 1890-1. 1st Year Student, 2nd Entrance Science Scholarship.

CROUCHER, H. The Limes, 320, Dartford Road, Dartford, Kent (retired).

CROUDACE, J. H 23, Marston Road, Stafford.

CROWDY, F. D. 1, Higher Terrace, Torquay. M.A., M.D. Oxon.
w 1884-5. 4th Year Student, the Mead Medal.
H.S., A.H.S., H.P.

CROXFORD, W. C. Havelock House, Park Road, Peterborough.

CUFF, A. W. Range More, Millington. B.A., M.B., B.C. Cantab., F.R.C.S. H.S., A.H.S.

CULLINGWORTH, C. J. 46, Brook Street, Grosvenor Square. M.D., Hon. D.C.L. Durh.; F.R.C.P.; Obst. Phys. and Lect. on Midw. and Dis. of Women, St. Thomas's Hospital.

DADACHANJI, E. R. Baroda, India.

DALES, W. 254, St. Phillip's Road, Sheffield.

DALGADO, D. G. Savantvadi, India.

DANIEL, E. G. C. The Silver Birches, Epsom. B.A., M.B., B.C. Cantab.

DANIEL, R.N. 6, Leyland Road, Lee.

DANVERS, H. St. George's Club, W.

DARBYSHIRE, D. E. 44, Harold Road, Upper Norwood. M.B. Vict.

DARKER, G. F. 21, Palace Square, Upper Norwood.

DARTER, G. B. S. Myrtle House, Cape Town. M.B., B.S. Durh.

DAVIDSON, A. D. 9, Picton Place, St. Helen's Road, Swansea. M.A., M.D. Cantab.
Ophth. Asst.

DAVIDSON, G.

DAVIES, A. O. Penrallt, Machynlleth, Montg.

DAVIES, D. S. Public Health Offices, 40, Prince Street, Bristol, and 60, Oakfield Road, Clifton. (Not in private practice.) M.B., M.D. (State Med.) Lond.; D.P.H. Cantab.
1875-6. Physical Society's 1st Year's Prize.
H.S., A.H.S., A.H.P.

DAVIES, H. E. 72, Whinbush Road, Hitchin, Herts.

DAVIES, S. H. R. Ashleigh, Teignmouth, S. Devon

DAVIS, E. H. West Hartlepool.
R.A.

DAVIS, G W. Sunnydene, Main Road, Sidcup, Kent. M.D., B.S. Durh.

DAVIS, H. J. 15a, Pembridge Crescent, Bayswater. M.A., M.B., B.C. Cantab.

DAVIS, R. Darrickwood, Orpington, Kent.

DAY, E. J. Dorchester.

DAY, W. H. Surrey Street, Norwich.

DEANE, E. Rodber House, Wincanton, Somers.

DE CAUX, H. L. The Eagles, Gregory Boulevard, Nottingham.

DECK, J. F. Ashfield, Sydney, N.S. Wales. M.D. St. And.
1860. 1st Year Student, 1st Coll. Prize.
1861. 2nd Year Student, 1st Coll. Prize; Physical Society's Prize.
1862. 3rd Year Student, 1st Coll. Prize; Physical Society's Prize; Cheselden Medal; Treasurer's Gold Medal.

DE GRUCHY, C. W. 30, High Street, Caerleon, Monmouthsh.

DE JERSEY, W. B. 94, Finchley Rd., South Hampstead. B.A., M.B., B.C. Cantab.
A.H.P., Clin. Asst. Ear Dept.

DE LOM, H. A. Surg.-Capt. Army.

DENNE, T. V. de. Cradley Heath, Staffordsh.

DEWES, F. J. Surg.-Capt. Madras Army.

DE WET, P. C. Pretoria, Transvaal, S. Africa.

DEWHURST, J. H. Chipping Campden, Glouc. M.A., M.B., B.C. Cantab.
H.S., A.H.S.

DE WOOLFSON, L. E. G. 26, St. John's Hill, Shrewsbury.

DICKENS, C. H. 269, Stanhope St., N.W.

DICKERSON, S. H. Brig.-Surg. Army. (retired).

DICKINSON, W. G. Thanet Lodge, Southfields, Wandsworth. D.P.H.

DICKSON, H. A. D. King's-Somborne, Stockbridge. F.R.C.S.
H.S., A.H.S.

DICKSON, T. H. Custom House, Lr. Thames St., and 32, Belvedere Rd., Upp. Norwood. M.A., M.B., B.C. Cantab.
A.H.P., Clin. Asst. Throat Dept.

DILLON, R. W. 1, Galveston Road, East Putney.

DIXON, H. L. Asst. Med. Off. Co. Asyl., Lancaster. M.A., M.B., B.C., D.P.H. Cantab.

DIXON, J. Harrow Lands, Dorking, Surrey. F.R.C.S., Cons. Surg. Roy. Lond. Ophth. Hosp.
Asst. Surg. St. Thos. Hosp.

DIXON, W. E. 28, Benson Rd., Forest Hill. B.Sc. Lond.
w 1890-91. 1st Year Student, 1st Entrance Science Scholarship.
s 1891. 1st Year Student, 2nd Coll. Prize.

DOBSON, A. Holbeach, Linc.

DOBSON, N. C. 27, Victoria Square, Clifton, Bristol. F.R.C.S., Prof. Surg. Bristol Univ. Coll., Cons. Surg. Bristol Gen. Hosp.
1865. 1st Year Student, 1st Coll. Prize.
1866. 2nd Year Student, 1st Coll. Prize.
1867. 3rd Year Student, 2nd Coll. Prize; A Prize and Hon. Cert. for Proficiency in Surgery and Surgical Anatomy at the Cheselden Medal Examination; Treasurer's Gold Medal.
H.S.

DODD, G. H. 2, Lily Mount, Bradford, Yorks. B.A. Cantab.

DONKIN, H. B. 108, Harley St., Cavendish Sq. M.A., M.D. Oxon.; F.R.C.P.
H.P.

DORMAN, M.R.P. 9, Norfolk Crescent, Hyde Park, W. M.A., M.B., B.C., D.P.H. Cantab.
H.P., Clin. Asst. Throat Dept.

DOUBLEDAY, J. Milford, Godalming, Surrey (retired).

DOUDNEY, G. H. St. Lawrence, Wainfleet, Linc. M.B. Durh.

DOUGLAS, A. L. 163, Westbourne Terr., Hyde Park.

DRAKE, C. H. Brixton Hill.
1858. 2nd Year Student, Treasurer's 1st Prize;
Clinical Medicine, 2nd Prize.
1859. Surgery and Surgical Anatomy, Cheselden Medal;
General Proficiency, Treasurer's Medal.
H.S.

DRAKE, T. Red House, Winchester.
1858. 2nd Year Student, Treasurer's 1st Prize.
1859. 2nd Year Student, President's Prize.
1860. 3rd Year, 1st Coll. Prize;
Surgery and Surgical Anatomy, Cheselden Medal;
General Proficiency, Treasurer's Medal.

DRAKE, W. E. Red House, Winchester. M.A., M.B., B.C. Cantab.

DREAPER, J. B. Parwich, Ashbourne, Derbyshire.

DRESSER, A. K. 19, Ossington St., Bayswater.

DRINKWATER, T. W. Chemical Laboratory, 5, Teviot Place, Edinburgh. Lect. on Chem. Sch. of Med. Edin.; Exam. in Chem. and Pub. Health R.C.S. Edin.

DRUITT, A. B.

DUFF, J. 5, Abbey St., Abbey Sq., Chester. M.D., C.M. Glasg.; M.R.C.P.
Clin. Asst. Throat Dept.

DUKES, C. Sunnyside, Rugby, Warwickshire. M.D., B.S. Lond., M.R.C.P., J.P.; Physician to Rugby School, and Senior Physician to Rugby Hospital.
H.S.

DUKES, T. A. 16, Wellesley Rd., Croydon, Surrey. M.B., B.Sc. Lond.
H.P.

DUMERGUE, H. W. 88, Victoria St., Westminster. M.A., M.D., B.C. Cantab.

DUNCAN, H. Shaftesbury Mansion, 52, Shaftesbury Avenue, W., and 8, Henrietta St., Covent Gdn. B.A. Cantab., M.B. Lond.
w 1882-3. 1st Year Student, 1st Entrance Science Scholarship, 1st Coll. Prize.
w 1883-4. 2nd Year Student, Prosector's Prize.
A.H.S.

DUNCAN, W. 6, Harley St., Cavendish Sq. M.R.C.P. Lond., M.D. Brux., F.R.C.S.; Obstetric Physician to, and Lecturer on Obstetric Medicine and Practical Midwifery at, Middlesex Hospital. Obstetric Physician, Royal Hospital for Women and Children. Examiner in Midwifery, Examining Board in England.
w 1876-7. 1st Year Student, The William Tite Scholarship.
s 1877. 1st Coll. Prize.
w 1877-8. 2nd Year Student, The Musgrove Scholarship;
2nd Year Physical Society's Prize.
s 1878. 1st Coll. Prize.
w 1878-9. 2nd Tenure Musgrove Scholarship; 1st Coll. Prize;
3rd Year Physical Society's Prize;
Grainger Testimonial Prize.
1880. 4th Year Student, The Cheselden Medal;
The Treasurer's Medal.
w 1881-2. The Solly Medal and Prize.
H.S., R.A.

DUNN, E. D. Nelson, New Zealand.

DUNN, J. E. 24, Stephenson Terr., Preston, Lanc.

DURANT, R. J. A. Surg.-Capt. Army.

DURRANT, T. A. Northampton Rd., Market Harborough, Leic.
Clin. Asst. Skin Dept.

DURSTON, J. C. 67D, Upper Tulse Hill, S.W.

DUTTON, A. S. Lyme Regis, Dorset.

DYKE, T. J. Merthyr-Tydvil. F.R.C.S.

EARLE, H. E. L. Surg. R.N.

EASTON, T. Hanover House, Stranraer, Wigtownshire. M.A., M.D., C.M. Edin.

ECCLES, C. H. Nether Penn, Nafferton, Yorks.
w 1884-5. 2nd Year Student, 1st Coll. Prize.
s 1885. 2nd Year Student, 1st Coll. Prize.
w 1885-6. 3rd Year Student, 1st Coll. Prize.
1886. 3rd Year Student, 1st Coll. Prize.
H.P.

ECCLES, R. B. Great Driffield, Yorks.

EDDOWES, J. H. Burleigh Fields, Loughborough, Leic. M.D. Glasg.
1843. Comparative Anatomy, Prize.
1844. Clinical Medical Reports, Silver Medal.
1845. Clinical Medicine, Prize.

EDDOWES, W. D. Stamford, Linc. Cons Surg. Stamford Infirm.
1845. Descriptive and Surgical Anatomy, Prize.

EDDOWES, W. D., Jun. Southwold, Suff.

EDGE, F. Oakfield, Compton Road, Wolverhampton. M.D., B.S., B.Sc. Lond.; F.R.C.S., M.R.C.P.

EDISS, G. N. 127, Church Street, Pendleton, Manchester.

EDMONDS, C. G. Manor House, Manor Park, Streatham.

EDMUNDS, W. 75, Lambeth Palace Road. M.A., M.B., M.C. Cantab.; F.R.C.S. Res. Med. Off. St. Thos. Home.
H.P., R.A., H.S.

EDWARDS, F. W. Camp Field, Overhill Road, Forest Hill

EDWARDS, V. The Villa, Shottisham, Woodbridge, Suffolk (retired).

EDYE, J. S. Surg.-Capt. Army.

ELLIOTT, J. W. 5, Manor Road, Forest Hill (retired)
Late Surg. Dentist.

ELLIS, H. H Claremont Studio, St. Mary's Terrace, Paddington.

ELLIS, J. Coburg Street, Fratton, Portsmouth, and Anaheim, Los Angeles Co., California. M.D. Brux.; M.R.C.P.I.
H.S.

ELLIS, R. K. M.B., B.Ch. Oxon.
Jun. and Sen. Obst. H.P.

ELLIS, W. C. Tollerton, Easingwold, Yorks.

ELWIN, C. J. 6, City Road, E.C.

EMBLETON, D. 19, Claremont Place, Newcastle-on-Tyne. M.D. Durh., M.D. Pisa, F.R.C.P. Cons. Phys. Newc. Ry. Infirm.

EMIN, M. M.B., C.M. Edin.

EMSON, A. Dorchester.

ENGLAND, G. F. A. 12, Southgate Street, Winchester. B.A., M.D., B.C. Cantab.

ETHERIDGE, C. Seasalter, Whitstable, Kent.

EVANS, C. S. Shaftesbury, Dorset. M.A., M.B., B.C. Cantab.
H.P., A.H.P., A.H.S.

EVANS, J. T. Hertford. M.D. St. And.

EVE, R. W. 101, Lewisham High Road. M.B. Aberd.

EVELYN, W. A. 24, Micklegate, York. M.A., M.D. Cantab.

FAIRBANK, J. 18, George Street, Hanover Square, W.
1866. 2nd Year Student, Prosector's Prize.

FARRANT, S. North Street House, Taunton.

FARROW, S. Ingham, Lincoln (retired).

FAULDS, H. 141, Duke Street, Fenton, Stoke-on-Trent.

FAWSSETT, F. 83, High Street, Lewes, Sussex. M.B., B.S. Lond.
w 1883-4. 1st Year Student, 2nd Entrance Science Scholarship. The William Tite Scholarship
s 1884. 1st Year Student, 1st Coll. Prize.
w 1884-5. 2nd Year Student, The Musgrove Scholarship.
w 1885-6. 3rd Year Student, 2nd tenure of Musgrove Scholarship, with 3rd Coll. Prize.
w 1886-7. 4th Year Student, The Cheselden Medal, Treasurer's Gold Medal.
R.A., H.S., A.H.S.

FAWSSETT, R. 36, Crockerton Road, Upper Tooting.

FELL, W. Wellington, New Zealand. M.B. Oxon.
H.P., A.H.P., A.H.S., R.A.

FENTON, H. A. H. 1, Cumberland Street, S.W. M.D. Brux.
w 1875-6. 1st Entrance Science Scholarship.
s 1876. 1st Year Student, 1st Coll. Prize.

FENWICK, P. C. 29, Harley Street. M.B. Lond.
Sen. and Jun. Obst. H.P.

FERNANDES, A. S. Bangalore, India. M.R.C.P. Edin.

FERNIE, W. T. The Nook, Great Malvern. M.D. Durham.
R.A.

FIELDING, J. Bethel Street, Norwich. M.D. Vict. Univ. Canada.
R.A.

FINCHAM, W. S. 53, Kew Bridge Rd., Brentford, Middlx.

FINUCANE, M. I. Bathurst, Gambia, W. Africa.

FISH, C. E. B.A., M.B., B.C. Cantab.

FISHER, J. Surg-Lt. I.M.S. Bengal. B.A., M.B., B.C Cantab.
Ophth. H.S.

FISHER, J. H. St. Thomas's Hosp. M.B., B.S. Lond., F.R.C.S.
Junior Demonstrator of Anatomy
w 1887-8. 1st Year Student, The William Tite Scholarship.
s 1888. 1st Year Student, 1st Coll. Prize.
w 1888-9. 2nd Year Student, The Musgrove Scholarship.
w 1889-90. 3rd Year Student, 2nd tenure of Musgrove Scholarship, with 1st Coll. Prize.
s 1890. 3rd Year Student, 1st Coll. Prize.
w 1890-1, 4th Year Student Treasurer's Gold Medal.
Sen. and Jun. Obst. H.P., H.S., A.H.S., Clin. Asst. Ear Dept., Ophth. H.S.

FISHER, T. Gt. Eccleston, Garstang, Lanc. Med. Off. Health Garstang.
s 1873. 2nd Year Student, 2nd Coll. Prize.
w 1874 2nd Year Student, 3rd Coll. Prize.
w 1875. 3rd Year Student, Surgery and Surgical Anatomy, Prize.

FISHER, T. E. H. The Retreat, Eglantine Rd., Wandsworth.

FITZGERALD, G. C. Med. Superint. Kent Co. Asyl., Chartham Down, Canterbury. M.D., B.C. Cantab.

FITZGERALD, W. A. Monte Carlo, Monaco. A.B., M.D. Dublin.; F.R.C.S.I.

FITZ-HENRY, G. W. Amberley, North Canterbury, New Zealand.

FLEGG, F. A. M. The Seamen's Hospital, Ramsgate.

FLETCHER, G. 60, Southwood Lane, Highgate. B.A., M.D. Cantab.

FLETCHER, T. B. E. 8, Clarendon Cresc., Leamington (retired). B.L. Paris; M.D., F.R.C.P., J.P., Cons. Phys. Birm. Gen. Hosp.

FLETCHER, W.B., Fleet Surgeon, R.N. (retired).

FLOYER, F. A. Mortimer, Berks. B.A., M.B. Cantab.
Demonstr. of Pract. Surg.

FOLEY, C. N. Beechcroft, 18, Tyson Rd., Forest Hill.

FONMARTIN, H. de. M.D. Paris, M.R.C.P. Lond.

FOOKS, W. P. Asst. Med. Superint. The Infirmary, Harrow Road, Paddington. M.A., M.B., B.C. Cantab. H.P.

FOOTNER, E. Brig. Surg. Army (retired). M.D., C.M. Aberd.

FORD, A. V. South View Lodge, Kent Rd., Southsea.

FORD, T.A.V. Haileybury College.

FORDE, T. A. M. 49, Park Road, West Dulwich. Surg. P. & O.
H.S., A.H.S., Clin. Asst. Skin and Throat Depts.

FORRESTER, W.

FORSTER, H. B. Emerald Hill, Victoria, Australia.

FORT, T. Falcon House, King St., and 31, Rochdale Rd., Oldham.

FORWARD, F. E. Antigua, W. Indies. F.R.C.S.
H.P., Ophth. H.S.

FOURACRE, R. P. 20, Tollington Park, N.

FOWLER, F. Minchinhampton, Stroud, Glouc.

FOWLER, REV. J. T. Bp. Hatfield's Hall, Durham, and Winterton, Doncaster (retired). M.A., D.C.L. Durh. H.S.

FOXWELL, A. 7, Newhall St., Birmingham, and Northfield Grange, Birmingham. B.A. Lond.; M.A., H.P.
M.D. Cantab.; F.R.C.P.

FRANCIS, G. P. The Bulwark, Brecon.

FRANKLIN, G. C. 39, London Rd., Leicester. F.R.C.S.
H.S., R.A.

FRASER, D. H. Colsterworth.

FRASER, D. Peterborough, Ontario, Canada.

FRASER, H. Bank House, Slough.

FREDERICK, H. J. 104, New Road, Chatham.
Clin. Asst. Throat and Ear Depts.

FREEMAN, A. J. 46, Brook St., and San Remo, Italy. M.D. Aberd.
Asst. Res. Med. Off.

FREEMAN, D. 218, Marylebone Rd., W.
1859. Clinical Medicine, Prize.

FREEMAN, E. C. Surg.-Capt. Army.

FREEMAN, W. H. 21, St. George's Square, S.W. (retired).

FROHWEIN, O. F. 93, Queen St., Portsea.

FULLER, A. L. 63, Barrowgate Road, Fulham.

FULLERTON, F. W. 79, Prospect St., Hull. M.B., B.S. Durh.

FURNIVAL, F. H. Mornington, Victoria, Australia.
w 1878-9. 1st Year Student; The Wm. Tite Scholarship.

GABBETT, P. C. I.M.S., Madras.

GARDENER, W. F. Darley House, Venner Road, Sydenham.

GARNER, J. County Infirmary, Downpatrick, Co. Down.

GARTON, W. Inglewood, Aughton, Ormskirk. M.D., C.M. Edin.; F.R.C.S.
1870. 2nd Year Student, 2nd Coll. Prize; Physical Society's 2nd Year's Prize.
1871. Physical Society's 3rd Year's Prize.
H.P, H.S.., R.A.

GEDGE, A. S. Asst. Med. Off. Co. Asyl., Maidstone, Kent.

GENGE, G. G. George Street, Croydon.
w 1890-1. 1st Year Student, 1st. Coll. Prize.
s 1891. 1st Year Student, 1st Coll. Prize.
w 1891-2. 2nd Year Student, The Peacock Scholarship.
w 1892-3. 3rd Year Student, 2nd Tenure of Peacock Scholarship, with 1st Coll. Prize.
w 1893-4. 4th Year Student. The Mead Medal; The Treasurer's Gold Medal.
H.P.

GEORGE, A. W. 1, Burton Road, Brondesbury. M.B., C.M. Edin.

GEORGE, C. F. Kirton-in-Lindsey, Linc.
1856. 2nd Year Student, Dr. Root's Prize.
1857. Surgery and Surgical Anatomy, Cheselden Medal.
H.S.

GEORGE, H. Calgary, Alberta, Canada. M.D. St. And.

GERVIS, A. F. 1, Queen's Crescent, Haverstock Hill.

GERVIS, F. H. 1, Fellows Road, Haverstock Hill.
1861. 1st Matriculation Scholarship—Coll. Prize, 2nd College Prize.
1862. 2nd Year Student, 1st Coll. Prize.
H.S., R.A.

GERVIS, H. 40, Harley Street, W., and The Beeches, Cowley, Uxbridge. M.D. Lond., F.R.C.P. Consulting Obstetric Physician to St. Thomas's Hospital, and to the Royal Maternity Charity.
1856. 1st Year Student, Trea. 1st Prize; Matriculation Examination, Physics, &c., Prize.
1857. 2nd Year Student, President's Prize; Physical Society's Essay, Prize.
1858. Clinical Assistant (Medicine), 2nd Prize;
Physical Society's Essay, Prize;
General Proficiency, Trea. Medal.
Lecturer on Midwifery and Diseases of Women and Children.

GERVIS, H. Windhill Place, Bishops Stortford, Herts. M.A., M.B., B.C. Cantab.
H.S., A.H.S., R.A.

GIBBS, A. N. G. 52, Whiteladies Road, Clifton, Bristol.

GIBSON, W. A.

GILBERT, H. P. c/o A. B. Gilbert, Esq., 4, Eaton Place, Brighton.

GILDER, S. E. A. The Limes, Mount Pleasant, Hastings.

GILES, F. W. Hotel Continental, Cannes, France. M.B. Durh.

GILL, J. 24, Pembroke Road, Clifton, Bristol. M.D. Brux.

GILLAM, J. B. Holt, Norfolk. B.A., M.B., B.C. Cantab.

GILLARD, C. R. Montreal, Canada.

GILMOUR, J. H. Hurstbourne-Tarrant, Andover, Hants.

GIMLETTE, G. H. D. Surg.-Major Bengal Army. M.D., M.Ch.R.U.I.
w 1876-7. Physical Society's 3rd Year's Prize.
H.P., R.A., H.S., A.H.S.

GIMLETTE, J. D. Lisbon, Portugal.

GIMLETTE, T. D. Fleet Surg. R.N.

GIRDLESTONE, H. E. 5, Haycroft Road, Brixton.

GODDARD, B. 27, Pentonville Road, and 106, Highbury New Park.

GODDARD, E. North Lynn, 106, Highbury New Park. M.D. Durh.
1860. Matriculation Examination, Classics, &c., Prize.

GODFREY, A. E. Lansdowne, 1, Woodside Park Road, North Finchley. M.B. Lond.
s 1883. 2nd Year Student, 2nd Coll. Prize.
w 1883-4. 3rd Year Student, 2nd Coll. Prize.
H.P., A.H.P., R.A.

GODFREY, H. J. C. 7, Manor St., Bridlington Quay, Yorks.

GODFREY, T. H. Stockton-on-Tees. M.B. Durh.; D.P.H. Cantab.

GOLDSMITH, J. Lee-on-the-Solent, Gosport, Hants. M.D. St. And.

GOOD, J. W. Winnipeg, Canada.

GOODDY, E. S. Rawmarsh, Rotherham. F.R.C.S.
w 1882-3. 2nd Year Student, 3rd Coll. Prize.
s 1883. 2nd Year Student, 1st Coll. Prize.
H.S., A.H.S., A.H.P.

GOODHUE, F. W. J. B.A. Cantab.

GORDON, B. Snake's Lane, Woodford, Essex.

GORNALL, J. G. Ribblesdale, Latchford, Chesh. M.A., M.B., B.C. Cantab.

GORST, H. Huyton, Liverpool.

GOULSTON, A. 2, Homefield Place, Heavitree, Exeter. M.A. Cantab.

GOVER, H. J. Littlebury, Saffron Walden, Essex. M.A., M.B. Cantab.

GOVER, L. D. 30, Bernard St., Russell Square.

GRABHAM, G. W. 150, Wilmer Road, Bradford, Yorks. M.D. Lond.; M.R.C.P.
1855. Matriculation Scholarship.

GRABHAM, M. Barbados, W. Indies. M.B., B.C. Cantab.

GRABHAM, M. C. Madeira. M.D. Aberd.; F.R.C.P. Lond.
H.S.

GRANT, J. W. G. Alcombe, Dunster, Somerset.

GRAY, C. Surg.-Maj. Army (retired).

GRAYDON, A. 124, Cornwall Road, Notting Hill.

GREAVES, C. A. 84, Friar Gate, Derby. M.B., LL.B. Lond. ; A.A. Oxon.
1861. 1st Year Student, Treasurer's Prize.
1862. 2nd Year Student, 2nd Coll. Prize; Physical Society's Prize.
1863. 3rd Year Student, 1st Coll. Prize; Physical Society's Prize; Cheselden Medal.
H.S., R.A.

GREAVES, H. Hankelow, Audlem, Chesh. B.A., M.B., B.C. Cantab.

GREEN, A. 1, Walker Terr., Gateshead-on-Tyne. M.B. Durh.

GREEN, C. D. Addison House, Upper Edmonton. M.D., B.S. Lond.; F.R.C.S. Eng.
w 1879-80. 1st Year Student, The Wm. Tite Scholarship.
s 1880. 3rd Coll. Prize.
w 1880-1. 1st Coll. Prize.
s 1882. 1st Coll. Prize.
H.S., A.H.S., H.P., A.H.P., R.A.

GREEN, E. C. 27, Friar Gate, Derby.

GREENE, F. W. Isipingo, Durban, Natal.

GREENFIELD, W. S. 7, Heriot Row, Edinburgh. M.D., F.R.C.P. Lond.; F.R.C.P. Edin.; F.R.S.E.; Prof. of Path. and Clin. Med. Univ. Edin.
Assist. Phys., Med. Regstr. and Lect. on Path. Anat.

GREENWOOD, J. W. Peel House, Hanley, Staffs. M.D. St. And.

GREGORY, S. Hadfield House, Birchanger Road, South Norwood.

GRESSWELL, G. 131, Victoria St., Gt. Grimsby, Linc. M.A. Oxon.; M.A. Cape of Good Hope.

GRIFFITH, A. L. 606, Harrow Road, W. M.D. St. And.

GRIFFITH, W. S. 4, Bramham Gardens, S.W. M.B., B.C. Cantab.; F.R.C.S.
H.S., Clin. Asst. Skin Dept.

GRIFFITHS, F. A. Ingleton, Lancaster, Yorks.

GRIMBLY, R. Summertown, Oxford (retired).

GRIMBLY, R. H. Newton Abbot, S. Devon.

GROOM, T. Whitchurch, Salop (retired). F.R.C.S.

GROOME, W. W. B.A., M.D. Cantab. H.P., A.H.P.

GROSE, S. Westbourne, Melksham, Wilts. M.D. St. And.; F.R.C.S.

GRÜNBAUM, A. S. F. Birmingham General Hospital. B.A., M.B., B.C. Cantab.
1893. Grainger Testimonial Prize.
H.P.

GURNEY, H. Stour House, Dovercourt, Essex.

GURNEY, R. A. F. Thame, Oxon.
1851. Practical Midwifery, Prize.

GWYNN, R. H. Crescent Villa, 8, Bristol Road, Kemp Town, Brighton.

HACON, E. D. 269, Mare St., Hackney. F.R.C.S.

HAGUE, J. T. 320, Brixton Road, S.W.

HAGUE, S. 325, Southampton St., Camberwell. LL.B. Lond.; M.D. St. And.
1863. 1st Year Student, 2nd Coll. Prize. Medical Registrar.

HAIG, F. M. 2, Warwick Row, Coventry. M.A., M.D., B.C. Cantab. H.P.

HAIG-BROWN, C. W. Dean Lodge, Godalming, Surrey. M.D., C.M. Aberd. Med. Off. Charterhouse Sch.
s 1878. 1st Year Student, 2nd Coll. Prize.
w 1878-9. 2nd Year Student, 2nd Coll. Prize.
w 1880-1. The Cheselden Medal.
H.P., A.H.P., H.S., A.H.S.

HAINES, A. 22, Oxford Road, Putney.

HAINWORTH, E. M. Royal Infirmary, Hull. M.B., B.S., B.Sc. Lond.
w 1888-9. 1st Year Student, 1st Entrance Science Scholarship.
s 1889. 1st Year Student, 2nd Coll. Prize.
w 1890-1. 3rd Year Student, 1st Coll. Prize.
s 1891. 3rd Year Student, 1st Coll. Prize.
H.S., A.H.S., H.P.

HAIRSINE, H. Roose House, Upp. Tooting.

HAKIM, H. M. Surg.-Maj. I.M.S., Madras.

HALL, J. B. General Infirm., Leeds. M.A., M.B., B.C. Cantab.; Res. Casualty Off. Gen. Infirm. Leeds.

HALL, J. L. Surg.-Maj. Army.

HALL, L. H. D.

HALL, R. D. G. The Lilacs, Arundel Road, Littlehampton, Sussex.

HALL, R. H. De Grey Lodge, Woodhouse Lane, Leeds. M.A., M.B., B.C. Cantab.

HALLILAY, R. P. 26, Moorland Road, Leeds.

HALLIWELL, T. O. Blagdon, Bristol. Clin. Asst. Throat Dept.

HAMERTON, G. A. 3, Southampton Street, Covent Gdn. M.D. Brux.; F.R.C.S. Eng. D.P.H.

HAMMOND, J. H. 11, Winckley Sq., Preston, Lanc. M.D. Aberd.; M.R.C.P., J.P.
1850. Medical Cases, President's Prize.

HANBURY, W. R. The Oaks, Sidcup, Kent.

HANLY, E. Buenos Ayres, Argentine Republic. M.D., M.Ch.Q.U.I.

HANNAH, F. R. 66, Jackson Road, Holloway.

HANSON, J. Adelaide, S. Australia.

HARCOURT, G. R. Upwey, Snakes Lane, Woodford Green.

HARDING, H. W. 24, Park Pleace, Greenwich.
H.S., A.H.S.

HARDING, J. A. Osman House, Fortis Green, E. Finchley.
1859. Clinical Medicine, 2nd Prize.
1860. Clinical Assistant (Medicine), 1st Prize.

HARDYMAN, C. E. 110, Queen St., Cardiff. M.D. Durh.; F.R.C.S.
H.S.

HARE, E. H. 46, Weston Park, Crouch End. M.A. Oxon; F.R.C.S. Eng.
A.H.P.

HARFORD-BATTERSBY, C. F. 33, Mornington Road, Bow. M.A., M.D., B.C. Cantab.

HARKNESS, A. Fairlight House, Hampton Hill.

HARLEY, J. 9, Stratford Place, W. M.D., F.R.C.P. Lond.; Cons. Phys. St. Thos. Hosp.; Cons. Phys. Lond. Fev. Hosp.

HARMAN, L. 25, Gresham Road, Brixton. M.B. Durh.

HARPER, J. Denny Dalton, District Vryheid, S. African Republic.

HARPER, J. R. Bear Street, Barnstaple, Devon.
H.S., A.H.S., R.A., S.O.C.

HARPER, R. 18, Park Road, West Dulwich (retired). J.P.
1845. Physical Society's Essay, Prize; Dresser's Clinical Surgery, Prize.

HARPER, R. R. Holbeach, Linc.

HARPER, W. J. Braunton, N. Devon,

HARRIS, F. A. Surg. Maj. Army.

HARRIS, H. Trengweath Place, Redruth, Cornwall. M.D. St. And.; F.R.C.S.

HARRIS, J. E. Elphinstone, Wellesley Road, Gunnersbury. B.A., D.Sc. Lond.
w 1887-8. 1st Year Student, 1st Entrance Science Scholarship.

HARRIS, J. B. Knight's Hill Lodge, West Norwood. M.D. Durh.

HARRIS, W. Res. Med. Superint. Norwich City Lunat. Asyl., Hellesdon, Norwich. F.R.C.S., M.R.C.P. Edin.

HARRIS, W. J. 44, Havelock Road, Hastings.

HARRIS-BICKFORD, A. Fore Hill, Camborne, and Easton House, Tuckingmill, Cornwall. M.D. St. And.

HARRISON, A. 52, Coombe Road, Teignmouth, Devon.

HARRISON, H. M. West Ayton, York. B.A. Cantab.

HARTLEY, H. Stone, Staffordsh.

HARTNOLL, H. T. 35, East Southernhay, Exeter.
H.S.

HARVEY, E. Hamilton, Bermuda, W. Indies.

HARVEY, S. F. 117A, Queen's Gate, South Kensington.

HARVEY, T. 6, Montague Place, Poplar.

HASLAM, J. N. Niel Lodge, Dagnall Pk., Selhurst.

HASLAM, W. F. 33, Paradise St., Birmingham, and 24, York Road, Edgbaston. F.R.C.S., Demonstr. of Anatomy Mason Coll. Birmingham, Surgeon Birmingham General Hospital. Examiner in Elementary Anatomy, Conjoint Board.
s 1876. 2nd Year Student, 1st Coll. Prize.
w 1877-8. The Cheselden Medal. Demonstrator of Anatomy, H.P., A.H.P., H.S., A.H.S., R.A.

HATCHETT, F. W. 6, Upper Cheyne Row, Chelsea, S.W.

HATHAWAY, C. 11, Edward Street, St. Leonards-on-Sea. M.D. Aberd.

HATHERELL, R. R. Hill Side, Banwell, Somers. M.A. Cantab.

HATTON, G. S. Hanover House, Newcastle-under-Lyme. M.D., M.S. Durh.; F.R.C.S. Edin.
w 1876-7. 2nd Year Student, Prosector's Prize.
H.P., A.H.P.

HAVILAND, A. 4, Broad Walk, Buxton.
Late Lect. on Geography of Disease.

HAWARD, H. H, Chattisham Hall, Ipswich. B.A. Cantab.
Clin. Asst. Skin Dept.

HAWKINS, H. P. 109, Harley Street, Cavendish Square. M.A., M.D. Oxon., F.R.C.P., Asst. Phys. to, Demonst. of Morbid Anatomy and Lecturer on Pathology at, St. Thos. Hosp.
w 1882-3. 1st Year Student, The William Tite Scholarship.
w 1883-4. 2nd Year Student, The Peacock Scholarship.
w 1884-5. 3rd Year Student, 2nd tenure of Peacock Scholarship and 1st Coll. Prize.
Res. Asst. Phys., H.P., A.H.P., Radcliffe Travelling Fellow, Oxford, 1886.

HAWKINS, W. The Vicarage, Abbotsbury, Dorchester.

HAYASHI, K. Tokyo, Japan.

HAYDON, T. H. Marlborough. B.A., M.B., B.C. Cantab.
H.S., A.H.S., Obst. H.P. and Demonst. of Pract. Surg.

HAYWARD, J.

HEATHER, B. G. Surg. R.N.

HEATON, A. B. 88, St. James's St., B.A., M.B., B.C. Cantab.

HEAVEN, J. C. 17, Whiteladies Rd., Clifton, Bristol. D.P.H., Lect. on Hygiene S.Kensington, and Demonst. of Hygiene Univ. Coll. Bristol.

HEELIS, R. Church Street, Lenton, Nottingham. M.D. Durh.
s 1877. 1st Year Student, 2nd Coll. Prize.
s 1878. 2nd Year Student, 2nd Coll. Prize.
A.H.P.

HEFFERNAN, H. H. The Grove, Caldicot, Mon.
w 1883-4. 1st Year Student, 2nd Coll. Prize.

HEFFERNAN, W. H. 100, Broomwood Road, Wandsworth Common.

HELSHAM, H. P. Beccles, Suffolk.

HELSHAM, W. M. 211, Victoria St., Sydney, N. S. Wales.

HEMINGWAY, J. Salisbury House, Clapton Square.

HENDERSON, W. D. 113, Redland Rd., Bristol.

HENRY, R. 27, West St., Harwich, Essex.

HENSLOWE, F. W. D. Elm Tree Villa, Victoria St., Dunstable, Beds.

HENTSCH, J. P. 174, Stockwell Rd., Brixton.

HERSCHELL, G. 25, Queen Anne St., W.

HEWAN, J. Joyning, North Lukimpore, Upp. Assam, India.

HEWETT, J. W. Medical Missionary, China Inland Mission, Pingyang, Shansee.
A.H.S.

HEYGATE, F. N. 5, Oxford Street, Wellingborough.

HEYGATE, W. N. 12, Bennett St., Bath.
R.A.

HEYWOOD, C. C. Irlams-o'-th'-Height, nr. Manchester. M.A., M.B., B.C. Cantab.
s 1888. 3rd Year Student, 2nd Coll. Prize
Clin. Asst. Throat Dept.

HICKS, Rt. Rev. J. W. Bloemfontein, Orange Free State. M.D., F.R.C.P.
1859. 1st Year Student, Treasurer's 1st Prize.
1860. 2nd Year Student, 1st Coll. Prize; Physical Society's Prize.
1861. 3rd Year Student, 1st Coll. Prize; Physical Society's Prize; Cheselden Medal; Treasurer's Gold Medal.

HICKS, T. W. Park House, East Finchley. M.B. Lond.
H.P., Obst. H.P., Clin. Asst. Throat Dept.

HIGHTON, T. Green Hill House, Normanton Road, Derby.
H.P.

HILDYARD, N.

HILEY, R. F.

HILL, D. P. S. Highworth, Wilts. M.B., B.Ch., B.A.O., R.U.I.

HILL, E. B. Longfleet, Poole, Dorset. B.A., M.B., B.C. Cantab.

HILLIAM, W. P. c/o Capt. Hilliam, Spalding, Linc.

HILLYER, W. H. Ellerslie, Buckden, Hunts.

HINNELL, J. S. 62, Garland St., Bury St. Edmund's. B.A., M.D., B.C. Cantab.
Ophth. Asst.

HITCHCOCK, H. K. Christowell, Branksome Park, Bournemouth. M.D. Brux.; J.P.

HOAR, C. The Grove, Robertsbridge, Sussex. M.B., C.M. Aberd.

HOBHOUSE, E. M.D., B.Ch. Oxon.; M.R.C.P.
w 1885-6. 3rd Year Student, 2nd Coll. Prize.
H.P., A.H.S.

HOCKRIDGE, T. G. 27, Tysoe St., Wilmington Sq., W.C. M.D., C.M. McGill, Montreal.

HODGES, H. B. Glenaveril, Knebworth, and Watton Cottage, Watton, Herts.

HODGES, H. C. Watton, Herts.

HODGES, R. 358, Camden Road, N. M.D. Aberd.; F.R.C.S.
1843, Surgical Essay, Silver Medal.

HODGSON, C. Asst. House Surg. Co. Hosp. York.

HODGSON, W. Gatefield House, Crewe, Chesh.

HODSON, T. Ingatestone, Essex.

HOLBERTON, H. N. Palace Road, East Molesey, Surrey. D.P.H.
w 1876-7. 2nd Entrance Science Scholarship, and 2nd Coll. Prize.
w 1877-8. 2nd Year Student, 1st Coll. Prize.
A.H.P.

HOLDING, C. 121, Victoria St., Westminster. F.R.C.S.

HOLDSWORTH, S. Burneytops House, Wakefield. M D. Pisa; M.R.C.P., J.P.

HOLLAND, E. W. B.A. Cantab.

HOLLOWAY, R. Edgecumbe House, Brockhurst, nr. Gosport.

HOME, A. L. 12, Goldhurst Terrace,
w 1894-5 Bristowe Medal.
A.H.S.

HOOD, N. L. Castlegate House, York, B.A., M.B., B.C. Cantab.

HOOPER, A. W. 1, Lesney Park Road, Erith.

HOOPER, J. H. 1, Lesney Park Rd., and 58, Pier Rd., Erith, Kent. M.D., M.S. Lond.; F.R.C.S.
1859. 2nd Year Student, Coll. Prize.

HOPE, G. 1, Flora Villas, Hanwell, W.

HORLEY, W. L. Stanboroughs, Hoddesden, Herts. (retired).

HOUGH, C. H. Full St., Derby.

HOUGH, J. Trumpington St., Cambridge. F.R.C.S., J.P.

HOUGHTON, L. 2, Sussex Square, Brighton

HOULGRAVE, A. 23, Gt. George's Rd., Waterloo, Liverpool.

HOUNSELL, F. C. W. The Fernery, Chudleigh, S. Devon. B.A. Cantab.
Ophth. Asst.

HOUSE, F. M. Bridgnorth Infirm., Bridgnorth.

HOW, A. B. Stradbroke, Wickham Market, Suffolk.

HOWELL, T. S. The Old Vicarage, Wandsworth.

HOWSE, W. 8, London Street, New Swindon, Wilts.

HUBBARD, A. J. Durrance House, Hemel-Hempstead, Herts. M.D. Durh.

HUDSON, H. Mannargudi, Tanjore, S. India.

HUDSON, J. S. House Surg., East Lond. Hosp. for children, Shadwell.

HUDSON, O. H. Meersbrook Edge, Chesterfield Road, Sheffield.

HUGHES, A. E. P. Darlington.
Ophth. H. S.

HUGHES, R. 15, Montague Road, Richmond Hill.

HULBERT, H. H. B.A. Oxon.
H.S., A.H.S., Clin. Asst. Throat and Ear Depts., Asst. Teacher of Pract. Surg.

HULL, W. Sydney, N. S. Wales, M.D. Lond.
w 1878-9. 2nd Entrance Science Scholarship.
w 1881-2. The Mead Medal.
H.P., A.H.P., H.S., A.H.S., R.A.

HUME, F. H. 53, Devonshire Street, N. M.D. St. And.

HUME, F. N. Med. Superint. Northern Hosp., Winchmore Hill.

HUNT, J. A. Brookfield, Borrowash, Derbysh.
w 1874. Prosector's Prize.

HUNT, J. P. Surg.-Maj. Army. M.D. Glasg., F.R.C.S.I.

HUNTLEY, L. 79, Freshfield Road, Kemp Town, Brighton.

HUSKINSON, H. Oakham. M.B. Durham.

HUTCHINSON, J. A. Northallerton, Yorks. M.D., M.S. Durh.

HUTTON, H. R. 8a, St. John St., Manchester. M.A., M.B. Cantab.
Demonst. of Physiol., Asst. Demonst. o Pract. Path. and H.P.

IDESON, J. J. Colne, Lancash.

ILES, A. R. Shutterne House, Taunton, Somers.

ILES, D. Fairford, Glouc.

ILLINGWORTH, J. A. Brig.-Surg. Army (retired).

INGLIS, W. W. Glendower, Queen Anne Av., Bromley, Kent. M.D. Heidelb.
1864. 1st Year Student, 2nd Coll. Prize.
1865. 2nd Year Student. 2nd Coll. Prize.
1866. 3rd Year Student, 3rd Coll. Prize; Cheselden Medal.
Medical Registrar and H.S.

IRVING, D. B. Vancouver, Brit. Columbia, Canada.

ISAACS, E. P. House Surg. Seamen's Hospital, Greenwich.
Ophth. H.S.

IVES, R. Chertsey Lodge, Portswood, Southampton.

JACKSON, J. 15, Huntingdon St., Barnsbury, N.

JACOBSON, T. E. Sleaford, Linc.
1852. Practical Midwifery, Prize.

JAFFÉ, C. S. 138, Sutherland Avenue, Maida Vale. M.D., B.S. Lond. Salters' Company, Research Fellow.
w 1887-8. 1st Year Student, Half 2nd Coll. Prize.
H.P., Jun. and Sen. Obs. H.P., Clin. Asst. Throat Dept.

JAMES, C. H. Surg.-Capt. Bengal Army.
w 1887-8. Solly Medal and Prize.
H.S., A.H.S., R.A.

JAMES, F. C. 48, Tregunter Road.

JAMES, J. M. 647, Queen's Road, Heeley, Sheffield.

JAMES, S. 6, Rodney Terr., Putney.

JARDINE, J. L. Capel, Dorking, Surrey.
1850. Medical Reports, Dr. Roots' Prize.
H.S.

JARVIS, J. 38, Gay Street, Bath.

JEFFERSON, A. J. Manilla, Philippine Islands. M.D., B.S. Lond.

JEFFERSON, T. J. Market Weighton, Yorks. M.D. Aberd.
H.S.

JEFFREYS, A. Devonshire Place, Aberavon, S. Wales.

JEFFREYS, J. G. 51, Pall Mall. M.D. Durh.

JEFFREYS-POWELL, J. P. Senny Bridge, Brecon, S. Wales.

JENNER, L. L. St. Thomas's Hospital. M.A., M.B., B. Ch. Oxon.; M.R.C.P.
s 1892. 3rd Year Student, 2nd Coll. Prize.

JOHNS, W. S. Caterham Valley, Surrey.

JOHNSON, C. G. Harpur Villa, Bedford.

JOHNSON, J. S. 1, Aston Villas, Teddington, Middlesex.

JOHNSON, W. G. 68, High Street, Bedford.
1855. Comparative Anatomy, Prize.

JOHNSTON, G. D. Georgia St., Vancouver, British Columbia, Canada.
w 1882-3. 4th Year, Cheselden Medal.
H.P., H.S., A.H.S., R.A., Ophth. Clin. Asst.

JOHNSTON, T. Barnstaple, North Devon.

JOLLY, S. B. Godstone House, West Hill, Sydenham. M.B. Cantab.

JONES, A. O. Cardigan Villa, Harrogate. M.D., C.M. Aberd.

JONES, A. W. Currie Schools, Folkestone. M.A. Oxon., Lect. in Chem. Currie Schools, Folkestone.
s 1888 3rd Year Student, 1st Coll. Prize.

JONES, B. S. 40, Wimpole St., W.

JONES, C. M. Glantaff House, Troedyrhiw, Glamorg.
R.A.

JONES, E. Ty-mawr, Aberdare, Glam. J.P.

JONES, E. J. T. Ty-mawr, Aberdare, Glamorg.

JONES, H. T. Pembroke, S. Wales.

JONES, J. T. Hornsea, Hull.

JONES, R. W. 77, Vauxhall Bridge Rd.

JONES, SYDNEY. 40, Wimpole St., W. M.B. Lond.; F.R.C.S. Eng.; Consulting Surgeon to St. Thomas's Hospital.
1851. Matriculation Scholarship, Prize; 1st Year Student, Scholarship.
1852. 2nd Year Student, Scholarship. Descriptive Anatomy, Prize.
1853. 3rd Year Student, Scholarship.
Late Member of Council, Royal College of Surgeons. Late Surg., Lect. on Surg., on Descrip. Surg., Surg. Anat., Ophth. Surg. and on Comp. Anat., Cur. of Mus., Demonst. of Healthy and Morbid Anat. at St. Thos. Hosp.

JONES, S. H. 40, Wimpole St., W.
w 1881-2 1st Year Student, 1st Entrance Science Scholarship. The William Tite Scholarship.
w 1882-3. 2nd Year Student, Half Musgrove Scholarship and 1st Coll. Prize combined. Prosector's Prize.
w 1883-4. 3rd Year Student, 2nd tenure of Half Musgrove Scholarship, with 1st Coll. Prize.
s 1884. 3rd Year Student, Half 1st and 2nd Coll. Prizes.
w 1884-5. 4th Year Student, The Cheselden Medal. Treasurer's Gold Medal.
H.S., A.H.S., Clin. Asst. Ear and Skin Depts.

JONES, T. J. Newton Lodge, Welsh Newton, Monmouth, Hereford. B.A. Cantab., M.B., C.M. Edin.

JONES, T. M. Kilby House, Loughor, Glamorg.

JONES, W. W. Pinehurst, Barlow Moor Rd., Didsbury, Manchester. M.A., M.B. Oxon., B.Sc. Lond.
w 1877-8. 1st Year Student; 1st Entrance Science Scholarship; £60; The William Tite Scholarship.
w 1877-8. 1st Year Physical Society's Prize.
s 1878. 1st Year Student, 1st Coll. Prize.
w 1878-9. 2nd Year Student, The College Scholarship.
s 1879. 2nd Year Student, 2nd Coll. Prize.
w 1879-80. 3rd Year Student, 2nd tenure of Coll. Scholarship, and 1st Coll. Prize.
w 1880-1. The Mead Medal; Treasurer's Gold Medal.
H.P., H.S., A.H.S., R.A.; Radcliffe Travelling Fellow, Oxford, 1880.

JOTHAM, E. 270, Camden Rd., N.W.

JOTHAM, E. S. 63, Roe St., Macclesfield.

JOTHAM, G. W. Tolcarn, Kidderminster. M.D., C.M. Aberd.

JULIUS, H. A. 15, Delamere Street, Westbourne Grove.

KAI, HO. 3, Elgin St., Hong Kong, China. M.B., C.M. Aberd.

KAKA, S. M. Karachi, India.

KAPADIA, S. A. 40, Glazbury Road, W. Kensington. M.D. Brux.

KAVANAGH, P. J. F. 56, Queen's Gardens, Lancaster Gate.

KEATES, W. C. 2, Tredegar Villas, East Dulwich Road.

KEELE, C. F. 3, Dyneham Rd., West Hampstead.

KEELE, G. T. 81, St. Paul's Road, Highbury, N.

KEELE, J. R. 8, Prospect Place, Southampton.

KELLER, H. L. A. Elm House, Hornsey. B.A. Oxon.

KELLOCK, T. H. Hospital for Sick Children, Gt. Ormond St. M.A., M.D., B.C. Cantab.
w 1889-90. 4th Year Student; The Cheselden Medal.
H.S., A.H.S., H.P.

KEMPE, C. M. Chantry House, New Shoreham, Sussex.

KER, J. E. Asst. Surg., Colonial Hosp., Gibraltar.

KERR, G. D. 14, Burlington Street, Brighton.

KERR, J. K. Glenaltans, Knock, Belfast. M.D., M.Ch. R.U.I.

KESER, J. S. 11, Harley St., Cavendish Square. M.D. Bâle; F.R.C.S. Eng.

KEYWORTH, J. W. Marton, New Zealand. M.D. Lond.
1848. Materia Medica Prize;
1849. Midwifery, 3rd Prize;
Physical Society's Essay, Prize.
1850. Ophthalmic Reports, a Governor's Prize;
Essay on Neuralgia, Mr. Newman Smith's Prize.
1851. Comparative Anatomy, Prize;
Clinical Medicine, Prize;
Surgical Reports, Prize;
Midwifery, Prize;
Medical Reports, Prize;
Pathology, Prize;
Physical Society's Essay, Prize.

KIDD, H. C. Bromsgrove, Worc. M.B. Lond.; F.R.C.S.
w 1881-2. 1st Year Student, 3rd Coll. Prize.
H.S., A.H.S., A.H.P. Clin. Asst. Ear Dept.

KILHAM, C. S. 1, Barber Road, Crookesmoor, Sheffield.

KILNER, W. J. 218, Ladbroke Grove, N. Kensington. B.A., M.B. Cantab.; M.R.C.P.
Electrician

KING, A. 40, Mill Hill Rd., Norwich.
w 1886-7. 1st Year Student, 1st Coll. Prize.
s 1887. 1st Year Student, 1st Coll. Prize.
s 1888. 2nd Year Student, 1st Coll. Prize.
w 1888-9. 3rd Year Student, 3rd Coll. Prize.
s 1889. 3rd Year Student, 1st Coll. Prize.
w 1889-90. 4th Year Student; Treasurer's Gold Medal.
H.P.

KING, A. F. W. Cheriton, Epsom.
Clin. Asst. Throat Dept.

KING, P. 29, Gay Street, Bath. B.A., M.D., B.C. Cantab.

KINGSFORD, B. H. Ashdene, East Molesey, Surrey.

KINNERSLY. G. E. Lisle Terrace, Guernsey.

KISCH, A. Abingdon House, 186, Sutherland Av., Maida Vale.

KITCHING, J. L. W. Cobham, Surrey.

KNAGGS, R. H. E. Diego Martin, Trinidad, W. Indies.

KNIGHT, H. Woking.

LABEY, J. The Homestead, Grouville, Jersey.

LAKE, R. 19, Harley St., Cavendish Square. F.R.C.S.
w 1881-2. 2nd Year Student, Prosector's Prize.
Clin. Asst. Ear Dept.

LAKE, W. W. Guildford, Surrey. D.P.H.
Obst. H.P.

LAMBERT, F. S. Balgowan, Newland, Lincoln.

LAMBERT, T. W. M.A., M.B., B.C. Cantab.
H.S., Clin. Asst. Skin Dept.

LANCASTER, J. Surg.-Lt.-Col., I.M.S. Madras.

LANDON, E. (Travelling.)

LANGTON, C. B. T. Long Sutton, Lincolnsh.

LANKESTER, A. C. Amritsur, India. M.B. Lond.
w 1885-6. 1st Year Student, 1st Coll. Prize.
w 1886-7. 2nd Year Student, Half 1st and 2nd Coll. Prizes.
w 1888-9. 4th Year Student, The Cheselden Medal.
H.S., A.H.S.

LANKESTER, F. J. 13, Belvoir Street, Leicester. D.D.S. Penna.; L.D.S.

LANKESTER, H. Rothesay, Victoria Road, Leicester. J.P.
1850. 1st Year Student, Scholarship;
Descriptive Anatomy, 1st Prize
Chemistry, Prize.
1851. Physiology, Prize;
Materia Medica, Prize;
Medicine, Prize;
1852. 3rd Year Student, Scholarship;
Medical Cases, President's Prize;
Medicine, Prize;
Surgery, Prize;
Surgery and Surgical Anatomy, Cheselden Medal;
General Proficiency, Treasurer's Medal.
1853. Surgical Essay, President's Prize.
H.S.

LANKESTER, H. H. Church Missionary Society. M.D. Lond.
w 1880-1. Entrance Science Scholarship;
1st Year Student, 2nd Coll. Prize.
w 1881-2. 2nd Year Student, The College Scholarship, Two Years.
H.P., R.A.

Laslett, M. H. Pembroke.

LATROBE, F. S.

LATTER, C. 10, Earl's Avenue, Folkestone. B.A., M.D., B.C. Cantab.
w 1890-1. 4th Year Student, The Mead Medal.
H.P., Obst. H.P.

LAUCHLAN, C. A. 43, Clapham Road.

LAVER, A. H. 26, Cemetery Road, Sheffield. M.D. Durh.
1870. 1st Year Student, 3rd Coll. Prize.
1871. 2nd Year Student, 2nd Coll. Prize.
w 1872. 3rd Year Student, 2nd Coll. Prize. Cheselden Medal.
H.S., H.P.

LAVER, H. Head Street, Colchester. J.P.

LAVER, J. W. Head St., Colchester.
H.P., Clin. Asst. Skin Dept.

LAVER, P. G. Head Street, Colchester.

LAW, R. R. The Maples, Sidcup, Kent. B.A., M.B., B.C. Cantab.
H.S., A.H.S., Clin. Asst. Skin Dept.

LAWFORD, J. B. 55, Queen Anne St., Cavendish Square. M.D. C.M. McGill, Montreal; F.R.C.S., Ophth. Surg. and Lect. on Ophthalmology St. Thos. Hosp. Asst. Surg. Roy. Lon. Ophth. Hosp.
Ophth. Clin. Asst., A.H.P.

LAWS, C. U. 246, Westgate Road, Newcastle-on-Tyne. M.D. Durh.

LAWS, W.G. Holmlea, Sherwood Rise, Notts. M.B., C.M. Edin.; F.R.C.S.
Ophth. H.S.

LAWSON, R Newton Hill, Leeds.

LAWTON, H. A. 74, High Street, Poole, Dorset. M.D. Durh.; D.P.H.

LAXTON, T. L. Barberton, Transvaal.
w 1876-7. 2nd Year Student, Prosector's Prize.

LAYTON, F. G. St. Stephen's Vicarage, Hounslow.

LEATHAM, H. B. New Plymouth, New Zealand.

LEDYARD, W. E. San Francisco, California, U.S.A. M.B. Toronto.

LEES, J. 21, Brixton Rd. M.D. St. And.
Demonstr. of Morb. Anat., Asst. Res. Med. Off., Med. Tutor and Registrar.

LEESON, J. R. Clifden House, Twickenham, Middlesex. M.D., C.M. Edin.
Demonstr. of Anat. and H.P.

LEICESTER, T. Sunnydene, St. Nicholas Rd., Upp. Tooting.

LESSEY, S. S.

LEVICK, H. D. Whitechapel Infirmary. F.R.C.S.
Jun. Obst. H.P.

LEWELLIN, A. J. R. Melbourne, Victoria, Australia. M.B., B.Ch. Melb.

LEWERS, T. R. Berry, New South Wales. M.B., B.Ch. Melbourne.

LEWIS, C. M. Steyning, Sussex.

LEWTAS, J. T. Jun. Army and Navy Club, St. James's St., S.W. M.D. Lond.

LIGHT, E. M. 2, Wilton Place, Belgrave Square. M.A., M.B., B.C. Cantab.
Clin. Asst. Throat Dept.

LIGHTFOOT, W. S. Staff-Surg. R.N.

LINDSAY, H. S.

LINGARD, A. Imperial Bacteriologist The College of Science, Poona, India. M.B., B.S. Durh.; D.P.H. H.P.

LITHGOW, J. M. 41, Humberstone Road, Leicester. M.D., M.Ch. R.U.I.

LITTELJOHN, S. G. Res. Med. Off. Central Lond. Distr. Schools, Hanwell. M.B., C.M. Edin.

LIVESEY, E. W. 95, Finchley Road.

LLEWELLYN, D. W. H. Southborough, Tunbridge Wells.

LLOYD, A. 25, Larkhall Rise, Clapham.

LOCKYER, C. W. 7, St. Julian's Farm Road, West Norwood.

LODGE, S., Jun. 13, Manningham Lane, Bradford, Yorks. M.D., B.S. Durh.

LOGAN, R. R. W. Ashby-de-la-Zouch.

LOMAS, H. Belper, Derbysh.

LONGINOTTO, M. J. Highbeach, Wickham Road, Brockley.

LONGMAN, A. Broad Chalk, Salisbury.

LONGSTAFF, G. B. Highlands, Putney Heath, and Twitchen, Morthoe, N. Devon. M.A., M.D., D.P.H. Oxon; F.R.C.P.; L.C.C.
w 1873-4. 1st Year Student, 2nd Coll. Prize.
s 1874. 1st Coll. Prize. Physical Society's 1st Year's Prize.
s 1875. 2nd Year Student, 2nd Coll. Prize.
w 1875-6. 3rd Year Student, 1st Coll. Prize.
w 1876-7. 4th Year Student, Mead Medal.

LONNON, F. Fern House, Denmark Hill.

LOTZ, H. J. Fremantle, West Australia. D.P.H.

LOW, H. 4, Sydney Place, South Kensington. M.A., M.B., B.C. Cantab.
H.P., R.A., S.O.C., Clin. Asst. Skin Dept.

LOW, P. C. Elmstead, Beulah Road, Tunbridge Wells, Kent. B.A., M.B., B.C. Cantab.

LOW, R. B. Local Govt. Bd., Whitehall and Helmsley House, Christchurch Road, Tulse Hill. M.D., C.M. Edin.; D.P.H. Cantab.

LOW, W. S. 50, Herne Hill, and 10, Westminster Bridge Road.

LUARD, H. B. Surg.-Capt. Bengal Army. B.A, M.B., B.C., D.P.H. Cantab.
s 1886. 3rd Year Student, 2nd Coll. Prize H.P., R.A.

LUCAS, G. Uckfield, Sussex.

LUNN, J. R. Med. Superint. St. Marylebone Infirm., Notting Hill. F.R.C.S. Edin.
H.S., R.A., A.H.S., A.H.P.

LUSH, J. S. Ivy Cottage, Market Lavington, Devizes, Wilts.
s 1873. 1st Year Student, 3rd Coll. Prize.

LUSH, W. H. Prospect House, Market Lavington, Devizes, Wilts.
w 1872. 2nd Year Student, Prosector's Prize.

LYNCH, G. W. A. Taviuni, Fiji. M.B., B.C. Cantab.

LYON, T. G. 8, Finsbury Circus. M.A., M.D. Cantab.; M.R.C.P.
H.P., Clin. Asst. Skin and Ear Depts.

MACCORMAC, Sir William. 13, Harley St., Cavendish Square. M.A.Q.U.I., M.Ch.(hon. causâ), D.Sc., F.R.C S.I.; F.R.C.S. Eng. Cons. Surg. to St. Thomas's Hospital; Emeritus Lecturer on Clinical Surgery.

MCDONNELL, J. O'M. Surg.-Lt.-Col. Bengal Army. M.D., M.Ch. R.U.I.; F.R.C.S.

MCDOWELL, D K. c/o Messrs. Holt & Co., 17, Whitehall Place.

MACEVOY, H. J. 41, Buckley Road, Brondesbury. M.D., B.Sc. Lond.
w 1884-5. 3rd Year Student, Half 2nd and 3rd Coll. Prizes.
s 1885. 3rd Year Student, Half 1st and 2nd Coll. Prizes.
w 1885-6. 4th Year Student, Bronze Mead Medal.
H.P., R.A., Clin. Asst. Throat Dept.

MCGEAGH, W. S. 100, Norroy Road, Putney.

MCILROY, J. B. Bodall, New South Wales.

MAC KELLAR, A. O. 79, Wimpole Street. M.D., M.Ch., Q.U.I., F.R.C S., Surgeon to and Sen. Lect. on Pract. Surg., Lect. on For. Med. at St. Thomas's Hospital.
Res. Asst. Surg.

MACKENZIE, H. W. G. 59, Welbeck St., Cavendish Square. M.A. Edin.; M.A., M.D. Cantab.; F.R.C.P. Lond.; Assistant Physician to St. Thomas's Hospital and to the Hospital for Consumption, Brompton; Lecturer on Pharmacology and Therapeutics and Joint Teacher of Practical Medicine at St. Thomas's Hospital.
w 1882-3. 3rd Year Student, 3rd Coll. Prize.
s 1883. 3rd Year Student, 1st Coll. Prize.
w 1883-4. 4th Year Student. The Mead Medal.
Resident Assistant Physician, Medical Registrar, H.P., A.H.P., and Clin. Asst. Skin Department.

MACKINNOM, A. D. Cooch Behar, Bengal. M.D. Aberd.

MACKRETH, J. F. Keyingham, Holderness, Hull.

MCLAUGHLIN, E. H. 45, Jeffreys Rd., Clapham Rd.

MACLEAN, A. 10, Mitre Court Chambers, Temple.

MACLEAN. H. H.

MACNAMARA, J. T. 50, Union Road, Rotherhithe.

MAC RAE, F. 49, Newgate St, E.C. M.B., C.M. Aberd.

MACTAVISH, J. W. Lowdham. Notts.

MADDEN, T. P. Falmouth, Jamaica, M.D., M.Ch.Q.U.I.

MADDICK, E. D. 320, Regent Street. F.R.C.S. Edin.

MAHON, R. H. D. 81, Earl's Court Road.

MAILE, C. E. D. Dedham House, Dedham, Essex.

MAKINS, G. H. 47, Charles Street, Berkeley Square. F.R.C.S. Asst. Surg., Joint Lect. on Anat., and Dean of Med. School, Surg. to Evelina Hosp., Exam. for Army and Navy.
Surg. Registr., Res. Asst. Surg., H.P., H S.

MANLEY, W. G. N. C.B., V.C. Surg.-Gen. Army (retired). 3, Lansdowne Terrace, Cheltenham.

MANNERS, W. F. Woodstock, Claygate, Surrey. B.A. Cantab.

MANSEL-HOWE, S. I. Londesborough House, Godstone, Surrey. M.D. Brux.
H.P., R.A.

MAPLES, R. Kingsclere, Newbury, Berks.
H.S., R.A.

MARCH, H. C. 2, West St., Rochdale. M.D. Lond., J.P.
1858. 1st Year Student, Treasurer's 2nd Prize.
H.S., R.A.

MARGENOUT, J. G. 59, Hayter Road, Brixton.

MARLOW, F. W. 13. East Jefferson St., Syracuse, New York.
H.S., A.H.P., Opth. Clin. Asst.

MARRINER, W. H L. Craig Vaen, Poole Road, West Bournemouth. M.B. Lond.
Clin. Asst. Ear and Throat Depts.

MARSACK, A.E. Whangarei, Auckland, New Zealand.

MARSDEN, T. Netherleigh, Sevenoaks, Kent. M.D., C.M. Aber.

MARSH, J. H. Heathfield, Sussex.

MARSHALL, A. 27, Grosvenor Road, Lowestoft. M.D. Brux.

MARSHALL, J. G. B.A., M.B. Cantab.

MARSTON, F. E. High Street, Welshpool, Montgomeryshire.
A.H.P.

MARTIN, C. J. Physiological Lab., Univ. of Sydney, N.S. Wales. M.B. Lond.
w 1884-5. 1st Year Student, 2nd Entrance Scholarship.

MARTIN, T. H. North Gate, Crawley, Sussex.

MASON, A. E. 61, Hillfield Road, West Hampstead.

MASON, F. W. 16, Gippeswyk Road, Ipswich.

MASON, G. A. 45, George Street, Portman Square. M.A., M.B., B.C. Cantab.

MASON, J. W. Beacon House, Painswick, Glouc. M.D. St. And.

MASON, R. 29, Cavendish Street, Ramsgate.

MASSEY, H. M. N. Adelaide, S. Australia.

MASSEY, H. T. Knockholt, Deal, Kent.

MATHIAS, W. L. 114, Darlinghurst Road, Sydney, N.S. Wales.

MATTEI, C. 56, Strada Reale, Sliema, Malta, and Strahan, Tasmania.

MATTEI, E. Accra, Gold Coast, West Africa.

MATTHEWS, C. E. Med. Superint. Fountain Hosp., Tooting Grove. B.A., M.D., B.Ch. Oxon., D.P.H.
Clin. Asst. Throat Dept.

MATURIN, B. A. Surg.-Capt. Army.

MAURICE, O. C. 75, London Street, Reading.

MAURICE, W. J. 11, Friar Street, Reading. M.A., M.B., B.Ch. Oxon.

MAVOR, W. S. Waltham Cross, Herts.
H.P.

MAYBURY, A. C. 19, Bloomsbury Square.

MAYBURY, A. V. Ashford House, Mile End, Landport. M.D., M.Ch.Q.U.I.
1870. 1st Year Student, 2nd Coll. Prize.
1871. 2nd Year Student, 1st Coll. Prize.
w 1872. 3rd Year Student, 1st Coll. Prize; Treasurer's Gold Medal.
H.S.

MAYBURY, H. M. 26, Almeida St., Upper St. M.D., M.Ch.Q.U.I.
1869. 1st Year Student, 2nd Coll. Prize.
1871. 3rd Year Student, 3rd Coll. Prize.

MAYBURY, L. 9, Hampshire Terr., Southsea. M.D., M.Ch. Q.U.I.

MAYBURY, W. A. 9, West Stockwell Street, Colchester, Essex. M D., M.Ch.Q.U.I.
1867. 1st Year Student, 3rd Coll. Prize.

MAYNARD, E. C. Leslie Villa, Richmond, Surrey.

MAYNARD, J. C. M. Erith, Kent. M.R C.P. Edin., J.P.

MEAD, H. T. H. Christchurch, Hants.

MEADOWS, B. 141, Victoria St., Westminster.

MEADOWS, H. 1, Spa Place, Humberstone Rd., Leicester.
1867. 1st Year Student, The William Tite Scholarship:
Phys. Soc. 1st Year's Prize.
1868. 2nd Year, Tite Scholarship;
Phys. Soc. 2nd Year's Prize.

MEASURES, J. W. Kent Lodge, 272, Wightman Road, Hornsey. (Not practising.)

MEGGITT, H. Madge Hill, Hanwell.

MELSOME, W. S. Queen's Coll., Cambridge. M.A., M.D., B.C. Cantab. Demonstr. of Anat. Univ. Camb.

MENNELL, Z. 1, Royal Crescent, Notting Hill.

MERCES, J. Australia.

MERRY, W. J. C. Lincoln College, Oxford. M.A., M.B., B.Ch. Oxon.
H P., H.S., Clin. Asst. Skin Dept.

METCALFE, A. W. Leyburn, Yorks. M.A., M.B., B.C. Cantab.

METCALFE, G. 22, Eldon Square, Newcastle-on-Tyne. M.B., B.S. Durh.

METCALFE, R. Leyburn, Yorks. M.D. St. And.

MICHAEL, H. J. Surg.-Maj. Army.

MICKLE, W. J. Med.-Superint. Grove Hall Asyl., Bow. M.D. Toronto, F.R.C.P.

MIDDLETON, R. W. 17, Hartington Terrace, Southsea. M.B., C.M. Glasg.

MIFSUD, A. E. 17, Strada Zaccaria, Valetta, Malta.

MILLAR, W. H. Cleveland Lodge, New Park Rd., Brixton Hill. M.D. Brux.
w 1888-9. 3rd Year Student, 2nd Coll. Prize.
s 1889. 3rd Year Student. 2nd Coll. Prize.
Clin. Asst. Throat Dept.

MILLER, F. M. 284, Amhurst Road, Stoke Newington.

MILLER, H. L. Warrnambool, Victoria, Australia.

MILLER, J. 136, South Lambeth Rd. M.D. Brux.

MILLER, J. T. R. Castlegate House, 78, Castlegate, Malton, and Leavening, Malton, Yorks.

MILLS, H. W. Louth, Lincs.

MILLS, R. J. 35, Surrey St., Norwich. M.B., C.M. Aberd.

MILLS-ROBERTS, R. H. Dinorwic Hosp., Llanberis, N. Wales. F.R.C.S. Edin.

MILTON, A. R. O. 11, Brunswick Place, Brighton.
w 1891-2. 4th Year Student, The Mead Medal.
H.P., H.S., A.H.S.

MILTON, F. R. S. Gov. Hosp., Port Said, Egypt.
H.S., A.H.S.

MILTON, H. M. N. Kasr el Aini Hospital, Cairo, Egypt.
H.S., A.H.S., H.P., A.H.P.

MILTON. W. F. E. Surgeon P. and O.
H.S., A.H.S.

MILWARD, F. V. 2, Cowley Street, Westminster. B.A., M.B., B.C. Cantab.

MISKIN, E. 162, York Rd., Lambeth
s 1890. 2nd Year Student, 1st Coll. Prize.

MISKIN, G. A. 162, York Rd., Lambeth. M.D. St. And.

MISKIN, L. J. 162, York Rd., Lambeth. M.B. Lond.
w 1889-90. 1st Year Student, 2nd Coll. Prize.
w 1890-1. 2nd Year Student, Half 1st and 2nd Coll. Prizes.
s 1891. 2nd Year Student, 1st Coll. Prize.
H.S., A.H.S.

MITCHELL, Rev. J. The Vicarage, Yealand Conyers, Carnforth, Lanc. M.D. St. And., M.R.C.P. Edin.
1866. 1st Year Student, 2nd Coll. Prize; Phys Society's 1st Year's Prize.
1867. 2nd Year Student, 2nd Coll. Prize.
1868. 3rd Year Student, 2nd Coll. Prize.
R.A.

MITCHELL, R. N. 27, Fitzjohn's Avenue. M.D. St. And.

MONEY, F. J. M.D. Lond.
1849. Descriptive Anatomy, 2nd Prize;
Chemistry Prize;
Materia Medica, 1st Prize;
Matriculation Scholarship, Prize;
1st Year Student Scholarship.
1850. Physiology, Prize;
Comparative Anatomy, Prize;
Descriptive Anatomy, Prize;
Medicine, Prize.
1851. Midwifery Prize;
Medicine, Prize;
Physical Society's Essay, Prize;
Surgery, Prize;
Surgery and Surgical Anatomy, Cheselden Medal;
General Proficiency, Treasurer's Gold Medal.

MONTAGUE, A. J. H. 35, Potter St., Worksop. M.D. Durh.
H.P., Clin. Asst. Skin Dept.

MOODY, J. M. Med. Superint. Lond. Co. Asyl. Cane Hill, Purley, Surrey.

MOORE, D. Woodthorpe, Sydenham Hill Road (not practising). M.D. St. And.

MOORE, H. M. Surg.-Lt., I.M.S. Bombay.
Clin. Asst. Ear Dept.

MOORE, P. L. Avonside, Tewkesbury.

MOORES, S. G. Surg.-Capt. Army.

MORETON, J. E. Tarvin, Chester. F.R.C.S.
1850. 1st Year Student, Scholarship;
1852. Physiology, Prize;
Descriptive Anatomy, Prize;
Physical Society's Essay, Prize;
Medicine, Prize;
Surgery, Prize;
2nd Year Student, Scholarship.
1853. 3rd Year Student, Scholarship;
Physiology, Prize;
Clinical Medicine, Pres. Prize;
Clinical Medicine, Treas. Prize;
Clinical Medicine, Mr. N. Smith's Prize;
Ophthalmic Surgery, Prize;
Medicine, Prize;
Surgery and Surgical Anatomy, Cheselden Medal;
Gen. Proficiency, Treas. Medal.
1854. Clinical Med., Dr. Root's Prize.
H.S.

MORETON, T. Northwich, and Spring Mount, Hartford, Chesh.
1857. 1st Year Student, Treasurer's 2nd Prize;
Matriculation Examination, Classics and Mathematics, Prize.
1858. Clinical Medicine, Prize.

MORETON, T. W. E. Tarvin, Chester. B.A. Cantab.

MORGAN, C. A. Greenhill, Thorncombe, Chard.

MORGAN, L. W. The Hafod, Pont-y-pridd, Glamorg. M.D., C.M. Aberd., J.P.

MORGAN, Ll. A. 118, Bedford Street South, Liverpool. M.D. Durh.

MORGAN, S. 15, Oakfield Road, Clifton, Bristol. M.D. St. And.
1854. Forensic Medicine, 2nd Prize.

MORGAN, S. W.

MORGAN, W. 3, Adelaide Street, Swansea.
R.A.

MORRIS, C. K. Gordon Lodge, Charlton Road, Blackheath.
w 1875. Prosector's Prize.

MORRIS, E. H. G. 8, Gloucester Terr., Onslow Gdns., S. Kensington. B.A., M.B., B.C. Cantab. Anæsthetist in the Dental Dept. St. Thomas's Hosp.

MORRIS, E. W. Kembla House, Port Adelaide, S. Australia.

MORRIS, J. E. Windhill, Bishop's Stortford, Herts. M.D. Durh.

MORRIS, S. G. Upp. Cwmtwrch, nr. Swansea. M.B., C.M. Edin.

MORTON, J. Eastgate House, Guildford. M.B. Lond.
H.S., R.A,

MOULLIN, J. A. M. 69, Wimpole St., Cavendish Square. M.A., M.B. Oxon.; M.R.C.P.
H.P.

MOXON, C. C. Market Place, Pontefract.

MUSSON, A. W. 15, King Street, Clitheroe, Lanc. B.A., M.B., B.C. Cantab.

MUSSON, W. E. Clitheroe, Lanc.
1850. Matriculation Scholarship, Prize.

NAIRN, R. Hastings, Napier, New Zealand. F.R.C.S.
Ophth. Asst., H.P.

NAUTH, B. Surg.-Lt. I.M.S. Madras.

NEATE, C. P. W. Stilton, 9, London Road, Forest Hill. F.R.C.P., F.R.C.S. Edin.

NETTLESHIP, E. 5, Wimpole St., W. F.R.C.S. Ophth. Surg. (Late Dean of Med. Sch.) St. Thos. Hosp.; Surg. Roy. Lond. Ophth. Hosp.

NEWBOULD, N. J. Abbots Bromley, Staff.

NEWBY, C. H. 20, Landport Terr., Southsea, Hants. F.R.C.S.
1870. Prosector's Prize.
Surg. Regist., H.S., H.P., R.A., Asst. Demonstr. of Anat.

NEWCOMBE, C. F. Victoria, British Columbia. M.D. Aberd.

NEWINGTON, A. S. L. Woodlands, Ticehurst, Sussex. M.B. Cantab.
H.P.

NEWINGTON, T. Ticehurst, Sussex. B.A. Cantab.

NEWSHOLME, A. Town Hall, and 11, Gloucester Place, Brighton. M.D. Lond.; M.R.C.P., Asst. Exam. in Hygiene Sci. Dept.
w 1875-6. 1st Year Student, 1st Coll. Prize.
w 1876-7. 2nd Year Student, 1st Coll. Scholarship.
s 1877. Ditto 1st Coll. Prize.
w 1877-8. 3rd Year Student, The "College Scholarship," 1st Coll. Prize.
H.P., A.H.P., A.H.S., R.A.

NEWTH, A. H. Hayward's Heath, Sussex. M.D. Aberd. Mem. Gen. Counc. Univ. Aberd.

NICHOL, F. E. 11, Ethelbert Terr., Margate. M.A., M.B., B.C. Cantab.
H.S., A.H.S., Clin. Asst. Skin Dept.

NICHOLSON, F. 29, Albion St., Hull. M.D. Lond. Phys. Hull Roy. Infirm.
w 1873. 1st Year Student, 1st Coll. Prize.
s 1873. Ditto 1st Coll. Prize.
w 1874. 2nd Year Student, 1st Coll. Prize.
s 1874. Ditto 1st Coll. Prize.
w 1875. 3rd Year Student, 1st Coll. Prize; Cheselden Medal; Mead Medal; Treasurer's Gold Medal.
R.A., H.P., H.S.

NICHOLSON, T. G. 25, Colet Gardens, Kensington. B.Sc. Lond.
w 1889-90. 1st Year Student, 1st Entrance Science Scholarship.
H.P., Clin. Asst. Skin Dept.

NIVEN, J. Health Office, Town Hall, Manchester. M.A. Aberd.; M.A., M.B., B.C. Cantab.

NIX, H. W. Gov. Res. Med. Off. Marble Bar, Pilbarra Gold Field, W. Australia. B.A., M.B., B.C. Cantab.
H.S., A.H.S.

NIX, R. E. Brompton Hospital. B.A., M.B., B.C. Cantab.
H.P.

NORRIS, E. S. 117, High Street, Eton, Bucks. M.A., M.B. Cantab.
Med. Regist. and Asst. Demonst. of Morb. Anat.

NORTHCOTE, P. Amwell, New Beckenham.
H.P.

NORTON, J. J. Leighlinbridge, Co. Carlow.

NOWELL, A. H. Clarendon House, Mortlake.

OBORN, H. W. 255, Lewisham High Road.

ODDIE, S. I. Pateley Bridge, Leeds. M.B., C.M. Edin.

ODLING, A. E. Alford, Linc.

OKELL, J. B. 2, Magdala Road, Nottingham.

OLDING, A. E. 13, Abinger Road, Deptford.

OLIVEY, W. J. Murchison, West Australia.

ORANGE, W., C.B. 12, Lexham Gardens, Kensington. M.D. Heidelb., F.R.C.P. Lond.

ORD, G. R. Streatham Hill, S.W.

ORD, G. W. Mildenhall, Suffolk.

ORD, R. W. 4, Cambridge Terrace, Dover. M.A.. M.B., B.C. Cantab. A.H.S.

ORD, W. M. 37, Upper Brook Street. M.D. Lond., F.R.C.P. Physician to St. Thomas's Hospital.
1853. Matriculation Exam. Scholarship; 1st Year Student, Scholarship; Descriptive Anatomy, Prize; Chemistry, Prize.
1854. 2nd Year Student, Scholarship; Medicine, Prize; Materia Medica, Prize; Physiology, Prize.
1855. 3rd Year Student, Scholarship; Surgery and Surgical Anatomy, Cheselden Medal; Forensic Medicine, Prize; Pathology, Prize; Practical Chemistry, Prize; Physiology, Prize; General Proficiency, Treasurer's Medal.
1856. Registrar, Prize.
Joint Lecturer on Medicine, Lecturer on Comparative Anatomy, Physiology, and Practical Physiology, Demonstr. of Anat., Surg. Registr. and H.S.

ORD, W. W. 2, Queen Street, Mayfair. M.A., M.D, B.Ch. Oxon, M.R.C.P. Assistant Physician to the Victoria Hospital for Children.
s 1884. 1st Year Student, 2nd Coll. Prize.
w 1884-5. 2nd Year Student, Half 2nd Coll. Prize.
w 1886-7. 4th Year Student, Mead Medal.
H.P., H.S., A.H.S.

ORFORD, J. Starfield House, Pontefract, Yorks.
H.S., H P., R.A.

ORISADIPE OBASA of Ikija (Prince), Lagos, W. Africa.

ORONHYATEKHA, A. 24, Charing Cross. M.D. Toronto.

ORTON, T. J. Surg.-Maj. Army. (retired).

OSBORN, S. 10, Maddox Street, Regent Street. F.R.C.S., J.P. Assistant Surgeon to the Hospital for Women, Soho Square.
1870. Physical Society, 2nd Year's Prize. Surgical Registrar, H.S., H.P., R.A.

OSBORNE, F. 23, Baker St., Portman Square.

OSBURN, H. B. Bagshot, Surrey. D.P.H.
R.A., S.O.C.

OWEN, C. W., C.I.E., C.M.G. Surg.-Maj. Bengal Army.

PALIN, E. W. Linton Vicarage, Ross. M.A., M.B., B.Ch. Oxon.

PALIN, H. V. Wrexham. M.B., C.M. Edin., J.P. Late Mayor of Wrexham, 1889-90-1.

PALMER, A. M. Whittington, Chesterfield.

PALMER, H. G. 83, Milkwood Road, Herne Hill.

PALMER, H. J. Heath, nr. Chesterfield, Derbysh.

PAPILLON, J. W. Brent Knoll, Bridgwater, Somers.

PAPILLON, T. A. House Surgeon, Eye Infirmary, Wolverhampton. F.R.C.S. Edin.

PANIOTY, J. E. 1, Larkin's Lane, Calcutta, India.

PARK, J. R. S. 183, King Street, Dukinfield, Cheshire.

PARKER, G. R. W. 19, Derby Lane, Stoneycroft, Liverpool. M.A. Cantab.

PARKER, G. W. 17, Tisbury Road, West Brighton.

PARKER, R. W. 13, Welbeck St., Cavendish Square.

PARKER, W. T. 68, Lillie Road, Fulham.

PARROTT, J. Stanhoe House, Grove Vale, East Dulwich.

PARSEY, E. W. 40, High St., Warwick. M.A., M.B., B.C. Cantab.

PARSON, F. J. Cape Town, South Africa.

PARSON, H. Oxford Villa, Bracknell, Berks. (retired).

PARSONS, C. O. 202, Castle Road, Roath, Cardiff.

PARSONS, F. G. 17, Micheldever Rd., Lee. F.R.C.S., Lect. on Comp. Anat. and Elem. Biol., Demonstr. of Anat. at St. Thomas's Hospital.
w 1882-3. 2nd Year, Prosector's Prize.
w 1886-7. 6th Year, Grainger Testimonial Prize.

PARSONS, W. D. 32, Huskisson St., Liverpool.

PARTRIDGE, W. T. 97, Albany Road, Old Kent Road.

PATCH, H. H. L. 23, Kensington Court Mansions.

PAUL, E. W. Hope House, West Cowes, I. W.

PAULING, W. T. Rondebosch, Cape Town.

PAYNE, J. F. 78, Wimpole Street, Cavendish Square. B.A., M.D. Oxon.; B.Sc., F.R.C.P. Lond.; Phys. and Jt. Lect. on Med. (late Lect. on Path. and Morb. Anat.) St. Thos. Hosp.
Radcliffe Travelling Fellow, Oxford.

PEARCE, G. H. 89, St. John's Road, Upper Holloway.

PEARSE, A W. Botesdale, Suffolk.

PEARSON, H. L. Bay House, Holt Hill, Tranmere, Birkenhead, and Devon House, Bedford Rd., Rock Ferry, Ches.

PEATLING, A. V. The Old Martnet, Wisbech, Cambs.

PEDLEY, R. D. 17, Railway Approach, Lond. Bridge. F.R.C.S.Edin.; L.D.S. Demonstr. of Dent. Surg.

PENHALL, J. T. Broadwas-on-Teme, Worc. (retired). M.D. St. And., F.R.C.S.

PERKINS, A. L. Sketty, Swansea.

PERKINS, J. J. Hosp. for Consumption, Brompton. M.A., M.B., B.C. Cantab.
w 1888-9. 3rd Year Student, 1st Coll. Prize. H.P.

PERKINS, J. S. 9, Palace Gate, Exeter. F.R.C.S.

PERN, A. Botley, Southampton. F.R.C.S., D.P.H.

PERN, E. C. Botley, Southampton.

PERRY, E. L. 3, St. George's Square.
w 1891-2. 2nd Year Student, 2nd Col. Prize.
w 1892-3. 3rd Year Student, 2nd Coll. Prize.

PERSHOUSE, F. Asst. Med. Off., S.West. Fev. Hosp., Stockwell.
H.P., Clin. Asst. Skin Dept.

PETMAN, A. P. 14, Waterloo Place, Pall Mall.

PETTIGREW, A. J. W. South Australia.

PHELPS, A. M. 37, Compton Terrace, Highbury. M.A., M.D. Cantab.

PHELPS, W. H. G. Weston-super-Mare. M.D. Aberd.

PHILLIPS, A. O. H. Warwick, Queensland.

PHILLIPS, A. S. 17, Kimbolton Rd., Bedford.

PHILLIPS, E. J. M. 33, Rodney Street, Liverpool. L.D.S., Hon. Dent. Surg. Liverp. Roy. Infirm., Lect. on Dent. Surg. Univ. Coll. Liverp.

PHILLIPS, E. V. Great Glenn, Leicester. D.P.H.

PHILLIPS, G. G. Tickhill, Rotherham, Yorks.
1860. 3rd Year Student, 3rd Coll. Prize. H.S.

PHILLIPS, J. D. Hoxne, Scole, Suffolk.

PHILLIPS, P. C. Cavendish Road, Sutton, Surrey.
Clin. Asst. Skin Dept.

PHILLIPS, S. C. Sussex Lodge, 177, Longley Road, Tooting Junction.

PICKFORD, J. K. 2, Alexandra Rd., Cleethorpes, Grt. Grimsby, Linc.
w 1872. 1st Year Student, 3rd Coll. Prize.

PIETERSEN, J. F. G. Ashwood House, Kingswinford, Staff.
w 1883-4. Solly Medal and Prize.
Clin. Asst. Throat Dept.

PIGGOTT, F. C. H. 13, Orchard Gdns., Teignmouth, S. Devon. B.A., M.D., B.C. Cantab.

PIKE, J. B. 15, High St., Loughborough.

PINTO, J. O. Surg.-Capt. I.M.S. Madras.

PITTS, B. 109, Harley St., Cavendish Square. M.A., M.B., B.C. Cantab., F.R.C.S., Surgeon and Lect. on Surg. St. Thos. Hosp.; Surg. Hosp. for Children, Gt. Ormond St.
Res. Asst. Surg., Demonst. of Anat., H.S., R.A.

PLANCK, C. County Asylum, Haywards Heath. M.A. Cantab.
w 1888-9. 1st Year Student, 2nd Coll. Prize.
w 1889-90. 2nd Year Student, The Peacock Scholarship.
s 1890. 2nd Year Student, 2nd Coll. Prize.
w 1890-1. 3rd Year Student, 2nd tenure of Peacock Scholarship, with 3rd Coll. Prize.
H.S., A.H.S., Clin. Asst. Ear Dept., Asst. Demonst. of Pract. Surg.

PLANT, C. Dalton-in-Furness, Lanc.

PLOWMAN, S. Victoria. F.R.C.S.

PLOWMAN, T. A. B. The Lawns, Balham Hill.

POCOCK, A. G. C. Manor View, High Road, Streatham, & 374, Brixton Rd.

POCOCK, W. Chicago, U.S.A.

PODMORE, R. 7, Linden Gardens, Chiswick.

POLLARD, F. 11, St. James's Road, Upper Tooting. M.D. Lond.
1865. 1st Year Student, 2nd Coll. Prize.
1866. 2nd Year Student, 2nd Coll. Prize; Physical Society's 2nd Year's Prize.
1868 3rd Year Student, 1st Coll. Prize; Physical Society's 3rd Year's Prize; Cheselden Medal.
Med. Regist., H.S., R.A.

POMEROY, W. Queen Camel, Bath.

POPE, E. Tring, Herts. (retired).

POTTER, H. P. Med. Superint. Kensington Infirm. M.D. Durh., F.R.C.S., D.P.H.
s 18-2. 3rd Coll. Prize.
w 1873. 2nd Year Student, 2nd Coll. Prize; Prosector's Prize.
w 1874. 3rd Year Student, 1st Coll. Prize; Cheselden Medal.
1875. Grainger Testimonial Prize.
Surgical Registrar, H.S., H.P., R.A.

POTTER, J. H. Cullompton, Devon.

POWELL, J. J. Norwood Lodge, Weybridge, and Byfleet, Surrey.

POWER, C. J. Hazelwood, Nailsworth, Glouc. M.A. Cantab., M.D. Dub.

POYNDER, G. F. Surg.-Maj. Army.

PRAIN, J. L. St. Thomas's Hospital.

PRALL, C. B. Surg.-Lt. Bengal Army.

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PRIOR, J.

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PUGH, J. H. California, U.S.A. B.A. Cantab.

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RANSON, W. Heathside, Norwich.

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1862. 1st Year Student, 1st Coll. Prize.
1863. 2nd Year Student, 1st Coll. Prize.
Lecturer on Psychology at Middlesex Hospital, and Medical Superintendent Hanwell Asylum.

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Joint Lect. on and Sen. Demonstr. of Anat., Joint Demonstr. of Morb. Anat.

REILLY, C. C. Surg.-Capt. Army.

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1880. 2nd Entrance Science Scholarship.
H.S., A.H.S., Asst. Demonstr. of Pract. Surg.

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RICHARDSON, S. W. F. Lorne Villas, Whitby. M.B., B.S., B.Sc. Lond.
w 1889-90. 1st Year Student, The William Tite Scholarship.
s 1890. 1st Year Student, 2nd Coll. Prize.
w 1890-1. 2nd Year Student, The Musgrove Scholarship
w 1891-2. 3rd Year Student, 2nd Tenure of Musgrove Scholarship.
s 1892. 3rd Year Student, 1st Coll. Prize.
w 1892-3. 4th Year Student, The Cheselden Medal;
The Treasurer's Gold Medal.
H.S., A.H.S., Sen. and Jun. Obst. H.P.

RIDGE, J. J. Carlton House, Enfield, Middlx. M.D., M.D. (State Med.), B.S., B.A., B.Sc. Lond.
1864. 1st Year Student, The William Tite Scholarship.
1865. 2nd Year of Tite Scholarship; Physical Society's 2nd Year's Prize; Prosector's Prize.
1866. The Grainger Testimonial Prize.
1868. 3rd Year Tite Scholarship; Treasurer's Gold Medal.
H.S.

RIDSDALE, A. E. Rottingdean, Sussex.

RIGBY, C. S. A. 15, Winckley Sq., and 9, Bushell Pl., Preston, Lanc.

RIGBY, P. A. Bhagalpur, Bengal, India.

RITCHIE, E. D. Blackwater House, Blackwater, Hants. M.A., M.B., B.C. Cantab.
H.S., A.H.S., H.P., A.H.P.

ROALFE-COX, W. J. The Laurels, Mortimer, Reading, Berks.

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ROBERTS, O. Nettlebed, Henley-on-Thames.

ROBERTSON, C. Cape Town, S. Africa.

ROBINSON, G. W. Surg.-Maj. Army.

ROBINSON, H. B. 1, Upper Wimpole Street. M.D., M.S. Lond., F.R.C.S. Assistant Surgeon to and Dem. of Anatomy at St. Thomas's Hospital. Assistant Surgeon to the East London Hospital for Children, Shadwell.
s 1881. 2nd Year Student, 1st Coll. Prize. Resident Assistant Surgeon, H.P., H.S., A.H.S.

ROBINSON, M. A.

ROBINSON, S. C. B. Surg.-Maj. Army.

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ROBSON, C.

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ROE, A. D. 47, West Hill, Wandsworth. B.A., M.B. Cantab
w 1880-1. 3rd Year Student, 2nd Coll. Prize.

ROE, E. A. H. Surg.-Lt.-Col. Army (retired).

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H.S.

ROSSITER, G. F. Cairo Lodge, Weston-super-Mare. M.B. Lond.
1871. 1st Year Student, 1st Coll. Prize.
w 1872. 2nd Year Student, 2nd Coll. Prize.
s 1872. 1st Coll. Prize.
w 1873. 3rd Year Student, 3rd Coll. Prize; Cheselden Medal; Treasuer's Gold Medal.
H.P., H.S., R.A.

ROSTANT, A. A. Port of Spain, Trinidad, W. Indies.

ROUILLARD, L. A. J. Durban, Natal. M.B. Camb.; F.R.C.S.
H.S., A.H.S.

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s 1880. 2nd Year Student, 3rd Coll. Prize. R.A.

ROWE, W. J. V. Johannesburg, Transvaal.

RUDALL, J. F. St. Thomas's Hosp. M.B., B.S. Melb.
Ophth. H.S.

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w 1889-90. 1st Year Student, 2nd Entrance Science Scholarship; 1st Coll. Prize.
s 1890. 1st Year Student, 1st Coll. Prize.
w 1890-1. 2nd Year Student, Half 1st and 2nd Coll. Prizes.
w 1891-2. 3rd Year Student, 1st. Coll. Prize.
H.P., H.S., A.H.S., Clin. Asst. Skin Dept.

RUSSELL, J. Cross Bank, Batley, Yorks. M.A. Aberd., M.D., C.M. Edin.

RUSSELL, J. S. R. 4, Queen Anne St., Cavendish Square. M.D., C.M. Edin.; M.R.C.P. Lond.

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RYGATE, R. Wardington, Banbury, Oxon.

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SANDWITH, F. M. Cairo, Egypt, and Savile Club, London. M.D. Durh.; M.R.C.P. Lond.; Phys. and Teacher of Clin. Med. Kasr el Aini Hosp., Cairo; Exam. in Med. and Path. at Med. Sch.
H.P., R.A.

SANEYOSHI, Y. Tokio, Japan. F.R.C.S.
w 1881-2. 3rd Year Student, 1st Coll. Prize.
H.P., A.H.P., A.H.S.

SANKEY, E. H. O. Boreatton Park, Baschurch, Salop. M.A., M.B., B.C. Cantab.

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A.H.P., Clin. Asst. Throat and Skin Depts.

SAPARA, O.

SARKIES, S. C. Surg.-Maj. Madras Army.

SAUNDERS, C. E. Med. Superint. Sussex Co. Asyl., Hayward's Heath. M.D., C.M. Aberd. ; M.R.C.P., D.P.H.
Surg. Regist., R.A.

SAUNDERS, E. A. 5, Alderbrook Rd., Nightingale Lane, Balham. B.A., M.B. Oxon.
w 1892-3. 4th Year Student, The Mead Medal.
H.P.

SAUNDERS, Sir Edwin. Fairlawn, Wimbledon Common (retired). F.R.C.S., Surg.-Dent. to H.M. the Queen and T.R.H. the Prince and Princess of Wales, also to his late R.H. Prince Consort.
Lect. on Anat. and Dis. of the Teeth,

SAUNDERS, H. The Priory, Deddington, Oxon. B.A. Cantab.

SAUNDERS, H. Surg.-Maj. Army.

SAUNDERS, H. W. Cape Colony. M.B. Lond., F.R C.S.
1867. 1st Year Student, 2nd Coll. Prize.
1868. Prosector's Prize.
1869. 3rd Year Student, 1st. Coll. Prize ; Treasurer's Gold Medal ; Physical Society's 3rd Year's Prize.

SAUNDERS, W. S. 13, Queen Street, Cheapside, and 58, Onslow Gdns., S.W. M.D. Castleton U.S.
1845. Medicine, Prize ; Midwifery, Prize ; Clinical Medicine, Prize.

SAVILL, T. D. 60, Upp. Berkeley St., Portman Sq. M.D. Lond., D.P.H. Cantab.
w 1875-6. 2nd Entrance Science Scholarship; 1st Year Student, The William Tite Scholarship.
s 1876. 3rd Coll. Prize.
s 1877. 2nd Year Student, 2nd Coll. Prize.
H.P., A.H.P., R.A.

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SCOTT, J. R. Market Overton, Oakham, Rutland.

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Clin. Asst. Skin. Dept.

SCUTT, T. H. 74, Micklegate, York.
w 1882-3. 3rd Year Student. 1st Coll. Prize.
A.H.P.

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A.H.P., Clin. Asst. Throat and Ear Dept.

SEDGWICK, H. R. Boroughbridge, Yorks. B.A., M.B., B.C. Cantab.

SEDGWICK, J. Boroughbridge, Yorks. M.D. St. And.

SEDGWICK, L. W. 2, Gloucester Terrace, Hyde Park. M.D. St. And.
1848. Descriptive and Surgical Anatomy, Prize ; Physiology and Anatomy, Prize ; Midwifery, Prize ; Surgery, Prize.
1849. Physiology, 1st Prize ; Midwifery, 1st Prize. ; Surgery, Prize ; Medicine, 1st Prize ; General Proficiency, Treasurer's Medal.

SEMON, F. 39, Wimpole Street, Cavendish Square. M.D. Berlin ; F.R.C.P. Lond. Phys. for Dis. of Throat St. Thos. Hosp.

SENIOR, E. W. Herne Bay.

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SERGEANT, E. County Offices, Preston, Lanc. L.S.Sc.
1870. 3rd Year Student, 3rd Coll. Prize ; Cheselden Medal.
H.S., R.A.

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SHARKEY, S. J. 2, Portland Place W. M.A., M.D. Oxon. ; F.R.C.P. ; Gulst. Lect. 1886. Phys., Jt. Lect. on Med. St. Thos. Hosp. ; Exam. in Path. Univ. Oxf. Exam. in Medl. Anat. and Principles, and Pract. of Med. R.C.P. Lond.
Demonstrator of Morbid Anatomy, and Res. Asst. Phys. ; Radcliffe Travelling Fellow, Univ. Oxf.

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w 1874-5. 1st Year Student, 1st Coll. Prize.
s 1875. 1st Coll. Prize.
w 1875-6. 2nd Year Student, 1st Coll. Prize.
H.P., A.H.P., R.A.

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1888. 2nd Year Student, Half 2nd Coll. Prize.
H.P., H.S., A.H.S., Clin. Asst. Throat Dept.

SHEPHEARD, J. Cromer Road, North Walsham, Norfolk. B.A. Cantab.

SHEPHEARD, P. C. Aylsham, Norfolk.

SHEPHERD, H. B. Goldielands, Settle, Yorks.

SHEPHERD, T. W. Castle St. House, Launceston, Cornwall.

SHEPPARD, W. J. 211, Upper Richmond Road, Putney. M.D., M.S. Durh.

w 1880-1. 3rd Year Student, 3rd Coll. Prize.
w 1881-2. The Treasurer's Gold Medal.
R.A., H.P., A.H.P., A.H.S.

SHERRINGTON, C. S. M.A., M.D., F.R.S. Professor of Physiology, University College, Liverpool. Fellow of Gonville and Caius College, Cambridge. Physiological Society Hon. Sec.

w 1882-3. 6th Year, Grainger Testimonial Prize.
Lecturer on Physiology.

SHIRRES, G. Melbourne, Victoria, Australia. M.D., C.M., D.P.H. Aberd.

SHIRTLIFF, E. D. Holmwood, Cowleigh Road, Malvern, Worc.

w 1882-3. 2nd Entrance Science Scholarship.

SIDDALL, G. O.

SIDDALL, J. B. (Travelling.) M.D., C.M. Aberd., D.P.H.

SIMMONS, E. L. St. Kilda, Victoria, Australia.

SIMMONDS, H. M. 66, Camberwell Road.

SIMON, Sir John, K.C.B. 40, Kensington Sq., W. F.R.C.S. (Hon.), F.R.S., Hon. M.D. et Chir. Munich, Hon. M.D. Dub., Hon. D.C.L. Oxon., Hon. LL.D. Cantab. et Edin. Cons. Surg. (formerly Surg. and Lect. on Path.) St. Thos. Hosp.

SIMON, M. F. Singapore, Straits Settlements. M.D. St. And. ; L.D.S. Edin.

1866. 1st Year Student, 1st Coll. Prize.
1869. 3rd Year Student, 3rd Coll. Prize ; Prosector's Prize ; Prize and Hon. Cert. for Surgery and Surgical Anatomy.

SIMPSON, H. Market Weighton, East Yorks. B.A., M.B., B.C. Cantab.

w 1889-90. 3rd Year Student, 3rd Coll. Prize.
A.H.S., Clin. Asst. Ear Dept.

SIMS, D. Res. Asst. Med. Off., The Infirmary, Lambeth.

SIMS, G. S. The Hollies, Green Hill, Derby.

s 1881. 1st Year Student, 3rd Coll. Prize.

SIMS, J. H. Whitchurch, Tavistock, Devon.

SINGH, B. J. Surg.-Capt. Bengal Army.

SISSONS, W. H. 3, Priestgate, Barton-on-Humber, Linc. J.P.

1858. Matriculation Examination–Physics, &c., Prize.
1859. Clinical Medicine, Prize ; Physical Society's Essay, Prize.
1860. 3rd Year Student, 2nd Coll. Prize ; Physical Society's Prize.
H.S.

SKARDON, T. G. Brig.-Surg. I.M.S., Bengal.

SLATER, J. S. Evesham, Worc. J.P.

1868. 1st Year Student, 1st Coll. Prize.
1869. Physical Society's 2nd Year's Prize.
1870. 3rd Year Student, 2nd Coll. Prize ; Treasurer's Gold Medal.
H.P., R.A.

SLAUGHTER, C. H. Insp.-Gen. R.N. (retired).

SLAUGHTER, J. E.

SLAUGHTER, W. B. Surg.-Lt.-Col. Army.

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SMITH, C. C. Redditch, Worcester. B.A., M.B. Cantab.
H.S., R.A.

SMITH, C. J. 2, Medina Villas, Brighton.

SMITH, E. Wallace Lodge, Balham High Road, Upper Tooting. M.B. Lond.
w 1888-9. 1st Year Student, 2nd Entrance Science Scholarship; The William Tite Scholarship.
s 1889. 1st Year Student, 1st Coll. Prize.
w 1889-90. 2nd Year Student, 1st Coll. Prize.
w 1890-1. 3rd Year Student, 2nd Coll. Prize.
s 1891. 3rd Year Student, 2nd Coll. Prize; Treasurer's Gold Medal.
H.S., A.H.S., Asst. Demonst. of Pract. Surg.

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SMITH, J. B. Dulwich.

SMITH, R. P. Res. Phys. and Med. Superint. Bethlem Royal Hosp. M.D., B.S., F.R.C.P.
s 1876. 2nd Year Student, 2nd Coll. Prize.
Res. Asst. Phys., H.P., A.H.P., H.S., A.H.S., Demonst. of Pract. Phys.

SMITH, S. L. 25, Argyle Square, King's Cross.

SMITH, W. H. Cranmore, Royal St. West, Sandown, Isle of Wight.

SMITH, W. H. Weston Lodge, Weston, Bath.

SMYTH, H. J. South Molton, N. Devon.
w 1882-3. 1st Year Student, 3rd Coll. Prize.
s 1883. 1st Year Student, 1st Coll. Prize.
w 1883-4. 2nd Year Student, 1st Coll. Prize.
s 1884. 2nd Year Student, 2nd Coll. Prize.
w 1885-6. 4th Year Student, Treasurer's Gold Medal.
H.P., R.A., Clin. Asst. Skin Dept

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w 1883-4. 2nd Year Student, 2nd Coll. Prize.
w 1885-6. Solly Medal and Prize.
Surg. Regist., A.H.S., R. A., Clin. Asst. Skin and Ear Depts.

SOLLY, R. V. 40, West Southernhay, Exeter. M.D., B.S. Lond.; F.R.C.S.
w 1884-5. 2nd Year Student, Half 2nd Coll. Prize.
H.S., A.H.S., Clin. Asst. Skin Dept.

SOLLY, S. E. Colorado Springs, Colorado, U.S.A.
Med. Registr.

SOUTH, R. E. E. Church Close, Boston, Linc.

SOUTHERN, F. G. Pant-yr-odin, Llandebie, S. Wales.

SOUTHERN, J. A. Friar Gate, Derby.

SOWERBY, T. Welshpool, Montgomery.

SPARKE, G. W. Mansfield, Notts.

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SPEED, H. A.

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H.P., Ophth. Asst.

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1856. Clin. Med. Prize.

SQUANCE, T. C. 4, Beauclerc Terr., Sunderland. M.D., M.S. Dunelm; L.S.Sc. Phys. and Path. Sunderland Infirm.

STABB, A. F. 5, Montpelier Terrace, Ilfracombe.
w 1885-6. 1st Year Student, 1st Entrance Science Scholarship; The William Tite Scholarship.
s 1886. 1st Year Student, 2nd Coll. Prize.
w 1886-7. 2nd Year Student, The Musgrove Scholarship.
s 1887. 2nd Year Student, 1st Coll. Prize.
w 1887-8. 3rd Year Student, 2nd Tenure of Musgrove Scholarship, with 1st Coll. Prize.
w 1888-9. Treasurer's Gold Medal.
H.S., A.H.S.

STABB, E. C. St. Thomas's Hospital. F.R.C.S. Jun. Dem. of Anat. and Demonst. of Pract. Surg.
w 1883-4. 2nd Year Student, Prosector's Prize.
s 1884. 2nd Year Student, 1st Coll. Prize.
Resident Assistant Surgeon, Surg. Regist., H.S., A.H.S., R.A., Clin. Asst. Throat and Ear Depts.

STABB, F. A. St. John's, Newfoundland.

STABB, H. H. St. John's, Newfoundland. M.D. Edin.

STABB, W. W. Croft Lodge, Torquay. M.D., B.C. Cantab.
w 1889-90. 4th Year Student, The Mead Medal.
H.P.

STABLEFORD, F. B. G. 114 Edmund Street, Birmingham.

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A.H.P.

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H.S., A.H.S., A.H.P., Clin. Asst. Ear Dept.

STEDMAN, S. B. Fairfield, Gt. Bookham.

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STEPHENS, W. J. Porth-Veor, Newquay, Cornwall.

STEVENSON, E. S. Rondebosch, Cape Colony. F.R.C.S. Edin.

STEWART, C. Royal College of Surgeons, Lincoln's Inn Fields. Prof. of Comp. Anat. and Phys., and Conserv. of Museum R.C.S. Eng.
Curator of Museum and Lecturer on Physiology and Comparative Anatomy.

STEWART, C. H. Asst. Med. Off., Co. Asyl., Littlemore, Oxford.

STILES, H. T. Spalding, Linc. M.D. St. And.

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H.P.

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H.P.

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1861. Matriculation Examination—Classics and Mathematics, President's Prize; Modern Languages, &c., Coll. Prize; Physics and Natural History, Coll. Prize;
The William Tite Scholarship.
1862. 2nd Year Tite's Scholarship.
1863. 3rd Year Tite's Scholarship; Treasurer's Gold Medal.
H.S., R.A., Surg. Registrar.

SUMMERHAYES, W. Brightling Mount, Burwash, Sussex. M.D. Durh.
1856. Matriculation Examination—Modern Languages, Prize.

SUTCLIFF, E. Gt. Torrington, Devon. M.D., C.M. Aberd. Mem. Gen. Counc. Univ. Aberd.
1861. 1st Year, 3rd Coll. Prize;
1863. 3rd Year Student, 3rd Coll. Prize.

SUTCLIFF, J. H. Farfield House, Ripley, Surrey (retired).

SUTCLIFFE, J. Ashbourne House, 625, Wandsworth Rd.
1869. Prosector's Prize.

SUTCLIFFE, W. G. 176, Larkhall Lane, Clapham.
w 1888-9. 1st Year Student, 1st Coll. Prize.
s 1889. 1st Year Student, 2nd Coll. Prize.
w 1889-90. 2nd Year Student, 2nd Coll. Prize.
w 1891-2. 4th Year Student, The Cheselden Medal.
H.S., A.H.S., Asst. Demonstr. Pract. Surg.

SUTTER, R. R. 410, Brixton Road. M.B., C.M. Aberd.

SUTTON, Rev. F. W. Umtata, Pondoland, Cape Colony.

SUTTON, H. M. Bagdad, Turkey-in-Asia.

SUTTON, S. W. Quetta, Afghanistan. M.D., B.S. Lond.
A.H.S., A.H.P., R.A.

SUZUKI, S. Tokio, Japan.

SWALE, H. 3, Abbeymead, Tavistock, Devon. M.B. Lond.
A.H.P., A.H.S.

SWALLOW, A. J. 5, Mount Edgcumbe Gdns., Clapham Rise, S.W. M.B., B.S. Durh.
Clin. Asst. Skin Dept.

SWALLOW, J. D. Clifton Lodge, Clarence Rd., Clapham Park. M.D. St. And.

SWEET, J. L. Tenbury, Worc.

SWEETAPPLE, H. A. Adelaide, S. Australia. M.D., B.S. Durh.

SWINDELLS, E.

SWINHOE, A. C. Park House, New Swindon, Wilts.

SWINHOE, G. R. New Swindon, Wilts.

SYMONS, R. FOX. 34, Christchurch Road, Streatham.
H.S., A.H.S.

TAKAKI, K. Tokio, Japan. F.R.C.S., Director-General of the Medical Department Imperial Japanese Navy, Surgeon to the Tokio General Hospital.
w 1875-6. 1st Year Student, 3rd Coll. Prize.
s 1876. 2nd Coll. Prize.
w 1876-7. 2nd Year Student, 1st Coll. Prize.
s 1877. 2nd Year Student, 3rd Coll. Prize.
w 1877-8. 3rd Year Student, 2nd Coll. Prize.
w 1878-9. 4th Year Student;
The Cheselden Medal;
The Treasurer's Gold Medal.
H.S., R.A., A.H.P.

TANNER, H. Devonshire Road, South Lambeth.

TANNER, M. B. 37, St. Aubyn's, West Brighton. M.D.R.U.I., M.D. St. And.

TARZEWELL, J. Sturminster Newton, Blandford, Dorset (retired).

TATE, W. W. H. 4, Queen Anne St., Cavendish Square. M.D. Lond., M.R.C.P. Obst. Tutor and Registrar St. Thos. Hosp.

TATHAM, E. 102, Glenthorne Road, Hammersmith.

TAYLOR, D. Hyla Kandy, Cachar, Bengal. M.D., R.U.I.

TAYLOR, F. P. St. John, New Brunswick, Canada.

TAYLOR, S. 16, Seymour Street, Portman Square. M.D., C.M. Aberd., M.R.C.P. Assistant Physician West London Hospital.
Demonstrator of Anatomy.

TAYLOR, S. J. 44, Prince of Wales Road, Norwich. M.B., C.M. Edin.
w 1875-6. 2nd Year Student, The Musgrove Scholarship.
w 1876-7. 3rd Year Student, 2nd Year Musgrove Scholarship, and 1st Coll. Prize.
w 1877-8. The Mead Medal;
The Treasurer's Gold Medal.

TEBB, W. S. Charlcombe, Boscombe Hill, Bournemouth. M.A., M.D. Cantab., D.P.H.
Clin. Asst. Throat Dept.

TERRY, J. Sen. House Surg. Roy. Surrey Co. Hosp., Guildford.

THOMAS, D. E. Eastfields, Chepstow Road, Newport, Mon.

THOMAS, J. T. Roslyn, Camborne, Cornwall.

THOMAS, J. W. Cresswell House, Neath, Glamorg.

THOMAS, P. C. Sea Point, Cape Town.

THOMAS, R. W. Temple Villa, Rye Lane, Peckham.

THOMPSON, C. H. Jun. Constitutional Club, Piccadilly. M.A., M.D. Dub., M.R.C.P., D.P.H.

THOMPSON, F. H. Cleobury Mortimer, Salop.
1870. Prosector's Prize.

THOMPSON, G. W. 13, Valley Bridge Parade, Scarborough. B.A., M.B., B.C. Cantab.
H.P., H.S.

THOMSON, G. J. C. 111, Sinclair Road, West Kensington Park. M.D. Durh.

THOMSON, M. 44, Victoria Road, Gipsy Hill, Norwood. M.D., F.R.S. Edin.

THORNTON, H. J.

THORP, A. E. 449, Lordship Lane, Dulwich.

THUDICHUM, J. L. W. 11, Pembroke Gdns., W. M.D. Giessen, F.R.C.P. Lect. on Path. Chem.

THURNAM, W. R. Sen. Med. Off. Bethnall House Asylum, Cambridge Road. M.B., B.S. Durh.

THURNELL, H. L.

THURSTAN, E. P. 93, Denmark Hill. M.D. Cantab.

THURSTON, E. O. 27, Panton St., Haymarket.
s 1892. 2nd Year Student, Half 1st and 2nd Coll. Prizes.
w 1892-3. 3rd Year Student, Half 3rd Coll. Prize.
w 1893-4. 4th Year Student, Cheselden Medal.
A.H.S.

TIMOTHY, P. V. 4, Lord Street, Leigh, Lancs.
1851. Practical Midwifery, Prize.

TIMS, H. W. M. Westminster Hosp. Med. School, Caxton St., Westminster. M.D., C.M. Edin., Lect. on Biol. and Comp. Anat. Westm. Hosp. Med. Sch.

TINLEY, W. E. F. Hildegard House, Whitby, Yorks. M.B., B.S. Durh.
w 1891-2. 2nd Year Student, 1st Coll. Prize.
s 1892. 2nd Year Student, Half 1st and 2nd Coll. Prizes.
w 1892-3. 3rd Year Student, Half 3rd Coll. Prize.
s 1893 3rd Year Student, 2nd Coll. Prize.
Sen. and Jun. Obstet. H.P.

TODD, F. 21, Finsbury Circus, E.C. L.D.S., Dent. Surg. Roy. Free Hosp.

TODD, H. J. McC. Staff Surg. R.N.

TOLLER, N. P. F.

TOLLER, S. G. St. Thomas's Hospital. M.D. Lond., Res. Asst. Phys.
w 1885-6. 1st Year Student, 2nd Entrance Science Scholarship.
s 1886. 1st Year Student, 1st Coll. Prize.
w 1886-7. 2nd Year Student, Half 1st and 2nd Coll. Prizes.
w 1887-8. 3rd Year Student, 2nd Coll. Prize.
w 1888-9. 4th Year Student, The Mead Medal.
Med. Regist. and Demonst. of Pract. Med., H.P., H.S., A.H.S., Jun. and Sen. Ophth. H.S., Clin. Asst. Throat and Ear Depts.

TOMPSETT, R. H. 103, Lambeth Palace Road.

TOMSON, W. B. Park Street West, Luton, Beds. M.D. Durh.
w 1879-80. 1st Year Student, 2nd Coll. Prize.
s 1880. 1st Year Student, 2nd Coll. Prize.
w 1880-1. 2nd Year Student, The Musgrove Scholarship, Prosector's Prize.
w 1881-2. 3rd Year Student, 2nd Coll. Prize; 2nd Tenure of Musgrove Scholarship.
s 1882. 2nd Coll. Prize.
w 1882-3. Treasurer's Gold Medal.
A.H.P.

TONKING, J. H. Chapel St., Camborne, Cornwall. M.B. Lond.
w 1884-5. 3rd Year Student, Half 2nd and 3rd Coll. Prizes.
w 1885-6. 4th Year Student, The Cheselden Medal.
H.S., A.H.S., Clin. Asst. Ear Dept.

TOOMBS, H. G. 40, Tierney Road, Streatham Hill.
Ophth. H.S.

TOPPING, J. P. Clarence House, Teddington, Middlx.

TOTSUKA, K. Tokyo, Japan. Deputy Inspector General of Hospitals, Imperial Japanese Navy.
s 1882. 1st Year Student, 2nd Coll. Prize.
w 1882-3. 2nd Year Student, Half Musgrove Scholarship and 1st Coll. Prize combined.
w 1883-4. 3rd Year Student, 2nd Tenure of Half Musgrove Scholarship, with 3rd Coll. Prize.
A.H.S.

TOWNSEND, M. 24, Upp. Philimore Place, Kensington.

TREADWELL, O. F. N. Med. Off. H.M. Conv. Prison, Borstal, Kent.

TREDINNICK, E. Penlu House, Craven Arms, Salop.

TREVES, E. 2, The Drive, Hove, Brighton.

TREVES, W. K. 31, Dalby Square, Margate. F.R.C.S.
1863. Modern Languages and Modern History, Coll. Prize.
1865. 3rd Year Student, 2nd Coll. Prize; Prosector's Prize.
H.S.

TREVITHICK, E. G. Pathological Laboratory, Cambridge. M.A., M.D., B.C. Cantab.

TREVOR, H. O. Surg.-Capt. Army.

TRIBE, A. G.

TRUMAN, C. E. 23, Old Burlington St., W. M.A. Cantab.; L.D.S., Dent. Surg. St. Thos. Hosp., Surg. Dent. Hosp. Lond.

TRURAN, T. 11, Pydar St., Truro.

TUPPEN, H. S. Nagasaki, West Cliff Road, Bournemouth. M.A., M.B., B.C. Cantab.

TURLE, A. Chipping Norton, Oxon.

TURNER, F. C. 15, Finsbury Square. M.A., M.D. Cantab.; F.R.C.P., Phys. and Demonstr. of Path. Anat. Lond. Hosp.
Res. Asst. Phys.

TURNER, G. M. Kingsley, Harrow. B.A. Cantab.

TURNER, J. G. 12, George St., Hanover Square. F.R.C.S., L.D.S.

TURNER, R. Lewes, Sussex.

TURNEY, H. G. 28, Wimpole Street, Cavendish Sq. M.A., M.B., M.Ch. Oxon.; M.R.C.P., F.R.C.S., Asst. Phys., Physn. to Electrical Dept., Teacher of Pract. Med., St. Thomas's Hospital.
w 1885-6. 2nd Year Student, 2nd Coll. Prize.
s 1886. 2nd Year Student, 2nd Coll. Prize.
w 1886-7. 3rd Year Student, 3rd Coll. Prize.
s 1887. 3rd Year Student, 1st Coll. Prize.
w 1887-8. The Mead Medal.
Res. Asst. Phys., H.S., H.P.

TYRRELL, W. 104, Cromwell Road, South Kensington. Sen. Anæsthetist St. Thos. Hosp.
Late H.P., A.H.P., R.A.

TYRRELL, W. Claremont, Great Malvern, and 2, Albert Mansions, Victoria Street., London, S.W.
1853. Ophthalmic Essay, Mr. Dixon's Prize.
1854. Surgical Reports, President's Prize.
H.S. and Asst. Demonstr.

TYRRELL, W. G. B. Claremont, Great Malvern. D.P.H.

UMNEY, W. F. Heather Bell, 15, Crystal Palace Park Rd., Sydenham. M.D. Lond.
w 1887-8. 2nd Year Student, 1st Coll. Prize.
H.P., Jun. and Sen. Obst. H.P., Clin. Asst. Skin Dept.

USHER, C. H. Ophth. Surg. Aberdeen Roy. Infirm. B.A., M.B., B.C. Cantab.
Ophth. H.S., Clin. Asst. Throat Dept.

USHER, T. S. Carlton House, Yeadon, Leeds. M.D. St. And.

VALLANCEY, A. d'E. de. Willoughby House, Ravenscroft Park.

VARDY, J. L. 72 and 74, Commercial Road, Portsmouth, and Portchester, Hants.
1855. Practical Midwifery, Prize.

VERDON, W. 47, Brixton Hill. M.D. Brux.; F.R.C.S. Eng.
Med. Regist., H.S., Asst. Demonstr. of Anat.

VICKERS, K. B. J. Redgate Hall, Wolsingham, Darlington.

VIVIAN, G. E. Staindrop, Darlington, Durham.

VIVIAN, J. H. P. 12, Homefield Rd., Chiswick.

VORES, A.

WADD, F. J. Prospect House, Richmond, Surrey. M.B., C.M. Aberd., Surg. H.R.H. the Princess Mary Adelaide and H.S.H. the Duke of Teck, Surg. Richmond Hospital. R.A.

WADD, H. R. Prospect House, Richmond, Surrey.

WADES, J. W. B. Fitzroy, Victoria, Australia. M.D., N.Y.; M.D. Aberd.

WADIA, D. R. Pacel, Bombay.

WAGSTAFFE, W. W. Purleigh, St. John's Hill, Sevenoaks, Kent. B.A. Lond., F.R.C.S.

1862. Matriculation Examination--Classics and Mathematics, President's Prize. Physics and Natural History, Coll. Prize; Modern Languages, &c., Coll. Prize; 1st Year Student, Treasurer's Prize.
1863. 2nd Year Student, 1st Coll. Prize.
1864. 3rd Year Student, 1st Coll. Prize; Physical Society's 3rd Year's Prize; Cheselden Medal; Treasurer's Gold Medal.

Sen. Asst. Surg., Lect. on Anat. and Res. Asst. Surg. St. Thos. Hosp., Mem. Board of Exam. R.C.S.E., Exam. in Arts Apoth. Hall, and Med. Insp. H.M. Privy Council.

WAINWRIGHT, A. S. R. Pembury Lodge, Tottenham, Middlesex.

WAINWRIGHT, W. L. Brixworth, Northampton. M.B., B.S.. Lond. H.S., A.H.S., Sen. and Jun. Obst. H.P.

WAITES, R. F. East Bank, Rotherham. Lect. on Hygiene Rotherham Sch. of Sci.

WAKEFIELD, M. J. 47, Christchurch Road, Doncaster. M.B. Durh.

WAKLEY, T., Jun. 5, Queen's Gate, S.W. Joint Editor of *The Lancet*.

WALCOTT, R. B. Barbados, W. Indies. M.D. Lond., F.R.C.S.

WALKER, A. W. H. Argyle House, Station Parade, Harrogate. M.D. Brux.

WALKER, G. L. Surg.-Maj. I.M.S., Madras. M.D., M.Ch., R.U.I.

WALKER, R. F. Vale Cottage, Esher, Surrey.

WALKER, Robt. Budleigh-Salterton, Devon. M.D. St. And.

WALKER, W. W. Gt. Northern Centr. Hosp. Holloway Road. B.A., M.B., B.C. Cantab.

WALLACE, A. C. 30, Saumarez St., Guernsey.

WALLACE, C. S. Wey Springs, Haslemere, Surrey. M.B., B.S. Lond., F.R.C.S., Surg. Registrar.

w 1887-8. 1st Year Student, Half 2nd Coll. Prize.
s 1888. 1st Year Student, 2nd Coll. Prize.
w 1888-9. 2nd Year Student, 1st Coll. Prize.
w 1889-90. 3rd Year Student, 2nd Coll. Prize.

H.S., A.H.S., Sen. and Jun. Obst. H.P., Clin. Asst. Ear Dept.

WALLACE, F. G. 50, Earl's Court Rd. M.A., M.B., B.C. Cantab. Non.-Res. H.P.

WALLACE, J. Carshalton, Surrey (retired).

WALLACE, L. A. R. 24, Norfolk Crescent, Hyde Park. B.A., M.B. Oxon. Clin. Asst. Ear Dept.

WALLER, A. W. 31, London Road, Stroud, Gloucester. D.P.H.

WALLER, W. B. 153, Seven Sisters Road, Holloway.

WALLFORD, W. Brome-Walton, 61, Appach Rd., Josephine Avenue, Brixton Hill.

WALMSLEY, H. Moss Cottage, Fylde Rd., Preston, Lanc.

WALTER, E. C. Market Place, Wallingford.

WALTERS, F. R. 60, Welbeck Street, and Ferndale, Fairfield Road, Croydon. M.D., B.S. Lond.; M.R.C.P., F.R.C.S., Phys. N. Lond. Consump. Hosp. and City Disp. A.H.P., A.H.S.

WARD, F. H. 8, Lyndhurst Villas, The Park, Ealing.

1863. 1st Year Student, Treasurer's Prize.
1864. 2nd Year Student, 1st Coll. Prize; Physical Society's 2nd Year's Prize.
1865. 3rd Year Student, 1st Coll. Prize; Physical Society's 3rd Year's Prize; Cheselden Medal; Treasurer's Gold Medal.

WARD, W. F. Bawtry, Yorks.

WARD, W. T. Stanhope, Canada. M.D., C.M. Montreal.

WARE, E. E. Iddesleigh, Heavitree Road, Exeter. M.D., B.S. Lond. H.S., A.H.S.

WARE, H. S. City of Lond. Hosp. for Dis. of Chest, Victoria Park. B.A., M.B., B.C. Cantab.

WARREN, S. Kensington, Adelaide, S. Australia.

WARRENER, R. Morborne, Peterborough. M.A. Cantab.

WATERS, F. W. 3, Lysias Road, Clapham Common.

WATERS, H. G. Asst. House Surg. Roy. Infirm., Hull.

WATERWORTH, E. A. 40, Key St. Newport, I.W. M.D. Aberd.

WATKINS-PITCHFORD, W. The Infirmary, Bridgenorth. M.B. Lond. H.P.

WAY, F. W. Elm Grove, Southsea.

WAY, J. H. F. Elm Grove, Southsea.

WAY, J. P. Mile End Villa, Landport. R.A.

WEARY, G. E. 52, Palmerston Road, Boscombe, Bournemouth.

WEBB, F. 21, Hall Gate, Doncaster.

WEBBER, W. W. Crewkerne, Somerset.
w 1876-7. 1st Year Student, 3rd Coll. Prize.

WEBSTER, E. 32, Richmond Place, Brighton.
w 1883-4. 1st Year Student, 1st Coll. Prize.
s 1885. 2nd Year Student, Half 2nd Coll. Prize.

WEBSTER, J. H. Whittlesea, Cambs.

WEBSTER, H. M. Woogaroo, Brisbane, Queensland.

WEEKES, F. H. 16, Gillygate, York. F.R.C.S.
w 1873-4. 1st Year Student, 3rd Coll. Prize.
s 1874. 3rd Coll. Prize.
w 1874-5. 2nd Coll. Student, 2nd Coll. Prize.
s 1875. 3rd Coll. Prize.
w 1875-6. 3rd Year Student, 3rd Coll. Prize.
H.S., R.A.

WELCH, C. H. 46, Upp. Rock Gdns., Brighton.

WELCH, R. W. F. 61, Oxford Street, Southampton.

WELCHMAN, E.
H.S., H.P.

WELLS, A. E. Cuckfield, Sussex. M.D. Lond.
w 1877-8. 1st Year Student, 2nd Entrance Science Scholarship.
H.P., A.H.P., H.S., A.H.S., R.A.

WELLS, Sir Spencer, Bart. 3, Upper Grosvenor Street. F.R.C.S. Eng. (Hon.), Pres. 1883, F.R.C.P.I. (Hon.), F.R.C.S.I. (Hon.), M.D. (Hon.) Dub., Leyden, Charkof, and Bologna; Surg. to the Queen's Household, Cons. Surg. Samarit. Hosp. for Wom. and Child.

WELSFORD, G. F. Gotham House, Tiverton, Devon. B.A., M.B. Cantab.

WEST, C. J. The Grove, Fulbeck, Grantham.

WEST, R. H. Elgin Lodge, Station Road, and 6, Hammett St., Taunton. M.A. Cantab.

WESTON, G. H. Forest Lodge, Shirley, Hants. M.B., D.P.H.

WHEATON, S. W. 52, The Chase, Clapham Common. M.D. Lond., M.R.C.P., D.P.H., Physician to the Royal Hospital for Children and Women, and to the Surrey Dispensary. Med. Insp. Local Govt. Board.
s 1885. 3rd Year Student, Half 1st and 2nd Coll. Prize.
w 1885-6. 4th Year Student, The Mead Medal.
H.P., R.A., Demonst. of Physics.

WHEELER, C. 96, Kennington Park Road.

WHEELER, P. C. E. D'Erf. English Hospital, Jerusalem. M.D. Brux., F.R.C.S. Edin.

WHELPTON, E. S. Gonville House, Beckenham Rd., Beckenham.

WHERRY, G. E. Corpus Bldgs., Cambridge. M.A., M.B., M.C. Cantab., F.R.C.S., Surg. Addenb. Hosp., Lect. on Surg. Univ. Camb.
Asst. Demonst. of Anat.

WHICHELLO, E. 47, Grosvenor Road. B.A., M.B., B.C. Cantab.

WHICHELLO, H. Wollaston, Wellingborough.

WHISHAW, R. R. Larkstone, Birdhurst Road, South Croydon. B.A., M.B., B.C. Cantab., F.R.C.S., Surg. Croydon Hosp.

WHISTLER, Rev. C. W. Elton Rectory, Peterborough.

WHISTON, P. H. Surg. Capt. Army. D.P.H.

WHITAKER, S. M. India.

WHITE, C. H. 3, East Circus St., Park Row, Nottingham.
R.A.

WHITE, E. F. Westlands, 280, Upp. Richmond Rd., Putney. F.R.C.S., Jun. Anæsthetist St. Thos. Hosp.
H.P., H.S., A.H.S.

WHITEHEAD, E. T. Camperdown House, 118, Lavender Hill.
w 1886-7. 1st Year Student, 2nd Coll. Prize.
s 1888. 2nd Year Student, Half 2nd Coll. Prize.

WHITEHEAD, J. L. Belgrave House, Ventnor, Isle of Wight. M.D. St. And.; M.R.C.P., Cons. Phys. Isle of Wight Co. Hosp.
H.S.

WICKHAM, G. H. Fleet, Hants. M.B., B.C. Cantab.
H.P., Clin. Asst. Ear Dept.

WIGHAM, W. H. Murivance House, Shrewsbury.

WIGHTMAN, H. T. 70, Clarkgrove Rd., Sheffield.

WIGLESWORTH, J. Med. Superint. Co. Asyl. Rainhill, Lanc. M.D. Lond.; M.R.C.P., Lect. on Ment. Dis. Univ. Coll. Liverpool, Exam. in Ment. Dis. Victoria Univ.

WILDE, L. Palace Mansions, Westminster. M.D. Durh.; M.R.C.P. Lond.; D.P.H.,; Med. Off. Health Bedfordshire County Council. Physician Croydon Boro' Hosp.

WILES, J. Dep. Surg.-Gen. Army (retired).

WILKINS, G. H. 134, Brixton Road. M.D. Durh.

WILKINSON, C. J. Leh House, Osborne Road, Windsor.

WILKS, G. A. F. Stanbury, Torquay (retired). M.D. Edin.; M.R.C.P. Lect. on Mat. Med.

WILLIAMS, A. H. Surg.-Lt.-Col. Bengal Army. M.B., C.M. Aberd.

WILLIAMS, A. W. 4, Cumberland Gate, Kew. M.B., C.M. Edin.

WILLIAMS, C. J. Brookside, Woodhall Spa, Linc.

WILLIAMS, D. C. L. Pendre, Brecon.

WILLIAMS, F. N. 181, High Street, Brentford.

WILLIAMS, G. C. W. Dunstaffnage, Wickham Road, Brockley.

WILLIAMS, G. F. C. Balcarres, 4, Brixton Hill.

WILLIAMS, H. Moor Park, Harrogate, Yorks. (not in practice). J.P.
1868. 1st Year Student, 2nd Coll. Prize.
1869. 2nd Year Student, 3rd Coll. Prize.
H.S.

WILLIAMS, H. B. 78, Lewisham High Road. M.D. Brux.

WILLIAMS, J. Swinton, Manchester. M.D. St. And.
1859. Clinical Medicine, Prize.

WILLIAMS, L. L. B. Sidmouth, Devon. M.B., C.M. Glasg.

WILLIAMS, P. M. G. Parrag House, Newport, Pembroke.
1854. Practical Midwifery, Prize.

WILLIAMS, R. B. Aston Clinton Rectory, Tring.

WILLIAMS, R. M. 95, St. Mark's Rd., North Kensington. M.D. Lond.
w 1879-80. 1st Entrance Science Scholarship. H.P., A.H.P., Asst. Demonst. of Pract. Surg.

WILLIS, C. F. Surg.-Maj. Bombay Army. M.D. Durh., M.R.C.P.

WILLOCK, E. H. 113, London Road, Croydon.

WILLSON, H. S. Station Rd., Byfleet, and Weybridge, Surrey. B.A., M.B., B.C. Cantab.

WILSON, A. 10, Frederika Terr., Anlaby Road, Hull.

WILSON, A. M. 1, Mill Street, Cape Town. M.D., B.S. Durh.

WILSON, S. 14, Devonshire Place, Stoke-on-Trent.

WILSON, W. 8, Piazza Madonna, Florence, Italy. M.D. Gött.; F.R.C.P. Lond.

WINDLEY, W. Colston-Bassett, Bingham, Notts.

WINDSOR, C. W. Seaman's Hospital, Greenwich. M.A., M.B., B.C. Cantab.
H.P.

WINDSOR, T. The Polygon, Ardwick, Manchester (retired.)

WINFIELD-ROLL, G. Infirm. Leicester. B.A., M.B., B.C. Cantab.
Ophth. H.S.

WINSTON, W. B. Stirling House, Brownlow Road, New Southgate. B.Sc. Lond.
w 1887-8. 1st Year Student, 2nd Entrance Science Scholarship.
w 1888-9. 2nd Year Student, 2nd Coll. Prize.
s 1889. 2nd Year Student, 1st Coll. Prize.
w 1891-2. Solly Medal and Prize.
Demonstr. of Physiology. Clin. Asst. Skin Dept.

WINTERBOTTOM, H. 148, Liverpool Road, Birkdale, Southport, Lancs. Cons. Surg. St. Mary's Hosp. Manch.

WINTERBURN, J. W. Elm Cottage, Durnsford Road, Wimbledon Park.

WISHART, J. London, Ontario Canada. F.R.C.S. Edin.

WOAKES, A. B. 78, Harley Street, Surg. Lond. Throat Hosp.

WOAKES, E. 78, Harley St., Cavendish Sq. M.D. Lond. Sen. Aur. Surg. Lond. Hosp., Lect. on Aur. Surg. Lond. Hosp. Med. Sch., Surg. Lond. Throat Hosp.

1857. 2nd Year Student, 2nd Prize; Clinical Medicine, Prize.
1858. Essay on Neuralgia, Mr. N. Smith's Prize;
Surgery and Surgical Anatomy, Cheselden Medal.
H.S.

WOLFF, A. 4, Ilchester Gdns., Prince's Square, Bayswater.

WOOD, E. J. Yalding, Maidstone, Kent. M.D. St. And.

WOOD, J. The Gables, Cranleigh, Surrey.

WOOD, R. Driffield, Yorks and The Red House, Robin Hood's Bay. M.D. St. And., J.P.

WOODHOUSE, T. J. 11, The Hill, Putney. M.D. Lond., F.R.C.S.

WOODHOUSE, T. P. Surg. Maj. Army.

WOODMAN, W. E. Oxford Lodge, Croydon. M.D. Durh.

S 1875. 1st Year Student, 2nd Coll. Prize.

WOODWARD, C. R. M. Listohan, Toowoomba, Queensland.

WORTH, E. H. 65, Selhurst Road, S. Norwood.

WORTHINGTON, G. F. J. Thorncliffe, Poole Rd., Bournemouth. M.R.C.P.I.

WRENCH, E. B. The Woodhouse, Bath St., Bakewell, Derby. M.B., B.C. Cantab.

WRENCH, E. M. Park Lodge, Baslow, and Bakewell, Derbyshire. F.R.C.S.

1851. Physical Society's Essay, Treasurer's 1st Year's Prize.
Asst. R.A.

WRIDE, F. G. Warrnambool, Victoria, Australia.

WRIGHT, A. The Lodge, Romford, Essex.

WRIGHT, E. H. Surg.-Capt. Madras Army.

S 1885. 2nd Year Student, Half 2nd Coll. Prize.

WRIGHT, S. F. Clarence Lodge, St. Albans. M.B. Lond.

WRINCH, E. P. Torbay Hosp., Torquay. M.B., B.S. Durh.

WROUGHTON, W. C. H. 135, Green Lanes, Stoke Newington.

WYMAN, C. Red Brae, 18, Putney Hill. M.A., M.D., B.C. Cantab.; F.R.C.S.

W 1889-90. Solly Medal and Prize.
H.P., H.S., A.H.S.

WYMAN, W. S. Red Brae, 18, Putney Hill. M.D. St. And., F.R.C.S.

1852. Matriculation Examination, Scholarship.

WYSARD, A. T. Malabar, Alleyne Road, West Dulwich.

YEOMAN, C. Kipping House, Thornton, Bradford, Yorks. B.A., M.B., B.C. Cantab.

R.A.

YEOMAN, S. Clark's Hill, Prestwich, Manchester. B.A., M.B., B.C Cantab.

ZEIDAN, Selim.

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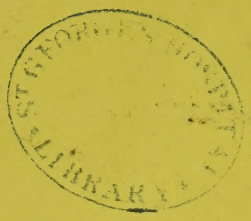
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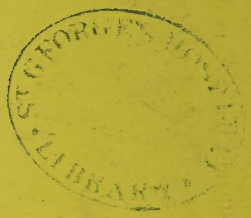
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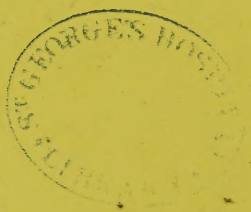
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